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Autonomy, asceticism, agonism – Max Weber's scientific objectivity as idea, practice and politics

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Abstract

Title: Autonomy, asceticism, agonism – Max Weber's scientific objectivity as idea, practice and politics

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Purpose and research questions: The aim of this study is to investigate the internal logic and the external context of Weber's writings about objectivity. This is done both through a theoretical investigation of the texts and through using Weber as a case study of the relation between scientific and cultural values. What is the internal logic and the historical specificity of Weber's account of objectivity? What role does the external social, political and cultural context play in shaping the form that these standards of objectivity have? How are questions of scientific methodology connected to wider cosmological issues?

Method and material: Drawing upon perspectives from contemporary science studies as well as from Weber studies, I will develop an analytical model of variants of objectivity. This model is used for explicating the details of Weber's version of objectivity, as well as clarifying what type of subject that it posits. I perform a close reading of parts of Weber's methodology, examining his attempts to co-produce social and scientific order. The primary empirical material consists of a selection of Weber's texts on methodology, science and politics.

Main result: The historically specific form of Max Weber's view of objectivity depends partly on his views of science, the self, politics and ethics. Some of the factors that take part in motivating and shaping his form of objectivity include Puritan asceticism, the German tradition of *Bildung*, and an agonistic understanding of politics. On multiple levels, objectivity is meant to safeguard autonomy.

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1. Introduction

Background

When doing science, we use methods. Methods are supposed to guarantee the validity of the results we attain. Underlying every set of methods is a wider *methodology* – whether this is acknowledged or not – against which the methods in question gain their meaning and validity. The Oxford dictionary of sociology states the following:

> The principal concern of methodology is wider philosophy of science issues […], and the study of how, in practice, [researchers] go about their work, how they conduct investigations and assess evidence, how they decide what is true and false. (Scott & Marshall (eds.) 2005)

A methodology can be said to contain answers to the question of how to carry out proper science. Different varieties will prescribe different methods, and these methods can not be judged entirely independently of methodological views. There is no outside point without implicit methodological presuppositions from which to judge the validity of science. In most methodologies, the question of how to achieve *objectivity* is of high priority. Objectivity is seen as one of the distinguishing marks of science, so it is important that the researchers are objective. What does that mean? Despite the vast amount of literature that deals with the concept of objectivity, there seems to have emerged no consensus as to how the concept should be treated, or what it refers to. Several discussants agree that it is important to recognise that the concept refers to several areas, but then disagree about what these are. In theoretical discussions of objectivity, we may analytically distinguish three different approaches: Critique, reconstruction and diversification.

A) *Critique* of objectivity has been directed at such things as its objectifying tendencies, its instrumentality, its male bias, its disembodiment, the impossibility of a view from nowhere, the scientific attitude's lack of emotion and concern for human values, etc. In the light of this criticism, some have concluded that belief in objectivity or parts thereof is naïve or harmful. A few see it as a dysfunctional ideal that needs to be wholly rejected, even though that is an unusual standpoint. B) *Reconstruction* of objectivity combines a measure of criticism with the claim that there are still valuable components to retain. It has been conceded that the critique is valid against an orthodox (instrumental, positivistic or androcentric) view of objectivity, but that it is possible to reformulate the concept in a form which avoids this critique. Several commentators have also noted the ethical and practical relevance of retaining a functioning concept of objectivity, and to avoid what seems as relativistic consequences of an all-out rejection.[1] C) *Diversification* of the concept has followed from empirical studies of scientific

[1] The defence of 'strong objectivity' in the works of Sandra Harding, is one of the more well-known attempts at reconstruction.

practice, as well as historical investigations. This type of research has made the image of scientific activity and reasoning more complex, and deepened our understanding of the multitude of factors that contribute to knowledge production. Among other things, the results have shown that it is far from obvious just what the common sense terms 'science' and 'objectivity' mean.[2] According to philosopher of science Ian Hacking, one important finding of some of this research is that 'epistemological concepts are not constants, free-standing ideas that are just there, timelessly.' They have histories, and histories are always social processes, involving institutions, power, language, practices and subjects. (Hacking 2002: 8) Therefore, a sociological perspective can enrich the understanding also of methodological and epistemological issues.

The diversification of objectivity is connected to an increased empirical interest generally in the guiding principles of scientific practice. Many acknowledge today that the *aims* found in methodologies are values. This discussion was opened up more generally by Thomas Kuhn, showing that criteria for theory choice are best understood as values. How do we judge the rationality or validity of a theory? We need some measure in order to judge the scientific merits of a theory or method. The criteria for doing this have to be weighed against each other, and there can be no method or formula to tell us precisely how to do that. New scientific values may emerge while some fall out of fashion, as e.g. utility has done. (Kuhn 1977) Ideals of good science change over time, including the criteria by which we judge scientific competence and proper research. (Nilsson 2009)

Some scholars refer to these scientific values as *virtues* since, just like moral virtues, they stand as regulative ideals for action, fostering the individuals who adhere to them and may also stand in tension to each other. The values in the service of scientific reason are also referred to as epistemic, cognitive, theoretical or intellectual values. Scientific values include (among others) empirical adequacy, simplicity, complexity, scope, accuracy, fruitfulness, certainty, internal coherence, external consistency with accepted theories, replicability, precision, utility, quantification and objectivity. Some have then wanted to make a distinction between the values present on the *inside* of science, which are intrinsic to scientific practice, and those on the *outside*. The outside values are then labelled cultural, contextual or non-cognitive values. The nature and validity of the distinction between scientific and cultural values is currently debated. Some argue that cultural values affect how scientific values rise to prominence, and how they are weighed against each other. In different ways, Lorraine Daston, Stephen Toulmin and Helen Longino all hold that the distinction is not clear-cut and unambiguous. Others wish to strictly demarcate the two types of values from each other, in

[2] I here have in mind sociologists such as Robert Proctor, Harry Collins, Trevor Pinch, and Bruno Latour, and historians such as Lorraine Daston, Peter Dear, Stephen Toulmin, Peter Galison, Theodore M. Porter, Simon Schaffer, Steven Shapin and Julie Robin Solomon. Also philosophers such as Ian Hacking and Hilary Putnam have produced useful works to this effect.

order to keep culture and society outside of science. (Daston 1991, 1994, 1995, Daston & Galison 1992, 2007, Dear 1992, Kincaid, Dupré & Wylie (eds.) 2007, Lacey 1999, Longino 1990, 1995, Porter 1994, Potter 1995)

If we follow the insights developed by Toulmin, Daston, Galison, Longino and others, methodological debates appear as *struggles over scientific values*. Scientific values are stressed differently in different contexts, and always have to be weighed against each other. With this in mind, it would be interesting to see if other factors could be found that affect how the choice between scientific values is performed. Do cultural values play a part in this? If so, is this directly or indirectly? What is the relation between scientific and cultural values? The inside of science is normally seen as being free from cultural values and politics. We could well ask: Do methodologies have politics?

Daston & Galison argue that epistemologies are motivated by fear of what improper knowledge might lead to. (Daston & Galison 2007: 49) Richard Bernstein introduced the term *Cartesian anxiety* to describe the concern for certainty that Descartes in the 17th century established as central for modern philosophy. Descartes was seriously worried about the consequences of not achieving certain knowledge. (Bernstein 1983: 16-19) Stephen Toulmin analyses this anxiety and the existential and political concerns that underlie it, to show how Descartes' epistemology arises out of its socio-political context. To understand Descartes epistemology *and the standards of scientific validity that it proposes*, one must understand the cultural currents and political struggles at the time. (Toulmin 1990, see also 2001 and 1961) In a similar case, Julie Robin Solomon shows how Francis Bacon's political concerns are present in his methodology. His conceptions of the royal and the real are closely linked. The authority of the monarch is transferred unto nature, or matter. His defence of good science is at the same time an advocacy of royal power. (Solomon 1998)

Focus

Against this background, it becomes interesting to turn to a classic theoretician of both scientific objectivity and the relation between science and values: Max Weber. If there are different varieties of objectivity, the question arises how Weber's account fit in with others. What is specific about it, and how does it fare in the light of critical discussions? Weber's objectivity focuses much on the relation between science, values and politics. How do the current debate and Weber's account illuminate each other? Bernstein talks of a Cartesian anxiety for certainty. In a similar vein, we may talk of a *Weberian anxiety* for objectivity. When reading Weber it is clear that these are matters of grave importance for him. He argues passionately against erroneous methodologies and appears to be deeply concerned about objectivity. What are the anxieties and concerns behind his methodological writings?

Weber provides an interesting case since he is not the simple-minded positivist or objectivist that some believe, but shows instead how culture, concepts, imagination and passions are always present in science. Weber is seen by many as a landmark in the history of science, one of the very first to articulate an ideal that since then has gained widespread acceptance. It has been commonplace to hold up value-freedom as an ideal worth following in science. (Eliaeson 2002) The renowned Weber scholar Wilhelm Hennis claims that Weber's ideal should be followed the way it is. (Hennis 1994) Sverker Gustavsson takes Weber to have provided the best solution so far of how to organise the relation between science and politics. (Gustavsson 1971) Gustavsson has had a large influence upon the last decades of Swedish science policy. (Elam & Glimell 2004) However, even if Weber's account of scientific objectivity is sophisticated and complex, it still holds problems and tensions. Some of these become more clearly visible in the light of recent scholarship. Weber studies normally do not refer to the large body of research on objectivity and the relation between science and culture, even though it has direct relevance for the issues that Weber discussed. The questions of the relation between science and politics, and between rational knowledge seeking and cultural values, are as pertinent as ever. Recent developments in science studies have perhaps made them even more pressing. Weber is in focus in this study, but the findings should be relevant for contemporary issues of science and politics.

Purpose

The aim of this study is to investigate both the internal logic *and the* external context *of Weber's objectivity.* My aim is to reconstruct Weber's theoretical arguments and the presuppositions they rest upon to see how his account analytically fits together, while *at the same time* tracing some of the empirical causal connections, social interests and cultural influences that contributed to making his methodology of objectivity into what it is. Weber's methodological writings are examined both to see what Weber theoretically *says* on the matter and what the case empirically *shows* us. The study thus has a twofold aim:

- *To re-examine Weber's theoretical contribution, with the help of recent scholarship on objectivity and other scientific values and explicate its internal logic.* This may expand our understanding of Weber's concept of objectivity, showing its historical specificity and its strengths and weaknesses.
- *To situate Weber in his historical context and use this as a case study of the relation between cultural values and scientific values.* This will clarify the relation between scientific *text* and social-historical *context*. This may illuminate the present debate, through investigating the relation between inside and outside of science.

Research questions

In the light of the contemporary debate, what can the theoretical contribution *and the* case *of Weber's objectivity tell us about objectivity and values in science?* This overarching question can be divided into two sets, relating to the twofold aim.

- *Theoretical questions*: What is the *internal logic* of Weber's objectivity? How can we understand the specificity of its form? How does this differ from other versions? What type of subject is it related to?
- *Empirical questions*: What role does the *external context* play? What does the case of Weber *show* about the relation between scientific and cultural values? Why does Weber's objectivity have the form that it has? How is objectivity connected to society and culture?

Methodological approach: Science and other parts of society

In this thesis I will use the terminology of the *inside* and the *outside* of science. The inside of science is that which different actors believe properly belongs there, and the outside is that which is not part of science; that which is not scientific (whatever that might mean). Different actors define inside and outside in varying ways and the content of the terms differs. Some consider the distinction between science and non-science as fairly unproblematic, even though they may disagree about exactly where and how to draw the line. It is orthodox to demarcate the properly scientific and rational from the merely cultural, emotional or political. Many sociologists, including Weber, have conceived of the matter in this way. This applies also to some who have questioned the inside. David Bloor outlined two different explanatory approaches in the sociology of knowledge and the history of science: Internalism and externalism. The first accounts for scientific knowledge by referring to factors *inside* science, such as reason, rationality, good arguments and truth. The second, yet un-attempted, would instead causally explain scientific results, by referring to social factors *outside* of science, such as interests, group conflicts, cultural currents, religious influence, etc. (Bloor 1991)

My approach is primarily inspired by Lorraine Daston (1995) and Stephen Toulmin. The latter gives numerous examples of how the standards of science and rationality depend on the socio-cultural context where they were first articulated. (Toulmin 1961, 1990, 2001) I am trying to avoid the dichotomy assumed when explaining science by referring *either* to internal reason *or* external causal processes. Instead, I aim to explicate how social processes, cultural currents and political interests *situate* and *give form* to Weber's rational arguments. Unlike an internalist account, rationality and standards of science are not a priori assumed to be unrelated to culture and context. In every particular case it is an empirical question if and how they have something to do with each other. Unlike an externalist account, the rationality on the inside is not removed from the picture, but historicised and contextualised.

Please note that even though we are looking for external factors, that is only part of the story. Even if we were to give psychologizing answers, such as 'Weber advocated objectivity because he was an anal personality with weak nerves', or sociologizing answers such as 'Weber advocated objectivity because he was younger/German/bourgeois', these answers would not *explain away* the need for understanding the internal rationality. To think that one could provide such answers and stop there, would be to give in to reductionism. Reductionist versions of these explanations (sometimes referred to as psychologism or sociologism) either leave all matters found on the inside of science completely untouched, including those of validity and rationality, *or* they risk reducing science to outside alone. The question is not just if we can find external (cultural, social, psychological) factors that *motivate* scientific activity. There is widespread agreement that this is the case. The question is if these external factors affect *how* science is practiced. Do they contribute to *forming the very standards of objectivity* that Weber proposes? Does their presence make a difference on the inside? Can we find external factors that not just motivate an *interest in* methodology, but which also to a degree affect the *design* of this methodology?

In modern societies, the social institution of science has come to play an increasingly large role. It would be misleading to speak of a relation between science *and* society. The last 30 years of science studies has shown clearly that science is very much a part of society. Science is not a disconnected culture-free activity which floats above or outside. It rests *in* society. The relation between science and politics can be seen as a relation between two social institutions within society. We may speak of a relation between science and *the rest of society*. It is now fairly common to speak of an entanglement between science and the rest of culture and society, even though there is no general agreement of how to describe the precise nature of this entanglement. Sheila Jasanoff uses the term *co-production* to refer to the way that elements of science, society and culture are intertwined and develop together. She argues that most of the work within science studies today can be interpreted as studying different aspects of co-production. (Jasanoff 2004) A pioneering work on how scientific order and social order are established as two sides of the same process, is Steven Shapin's and Simon Schaffer's *Leviathan and the air-pump*. They show how methodologies draw boundaries between different fields of reality, ordering and dividing up the world. (Shapin & Schaffer 1984)

Both sociologists and anthropologists study the kind of distinctions and boundaries that actors make, regarding social institutions as well as the things that exist in the world. When describing how actors' different beliefs and values are internally related and hang together as a whole, and how they divide up reality into categories, it is common to speak of *cosmology*. To speak of a world-view as a whole does not mean that this whole is necessarily free from tensions and internal contradictions, only that practices, beliefs and values are related and

cohere to a degree. This approach can be applied also to science. (Sahlins 1996, Latour 1993, Johansson 2008)

The *background assumptions* that scientists have about entities and natural order, and which inform their studies and modes of explanations, often have the character of cosmological assumptions. (Sismondo 1996, Longino 1990, Toulmin 1961) A cosmology gives sense and meaning to the practices of a culture, telling actors what it is that they do and why. This applies also to Weber's description of objectivity. As this study has found, his prescription of objective conduct is fully intelligible only when it is viewed as part of a wider cosmology encompassing science, self, politics and ethics, including the worries that make objectivity needed.

Method

Although the purpose and the research questions are divided in two, relating to inside and outside, the separation between two tasks lies mainly on an analytical level. In practice I will interweave these. The two sets of questions will be treated in a unified account, although the focus is initially more on the first and gradually shifts towards the second. I will perform a *case study* of Weber's writings about objectivity. This gives a historical example of the relations between objectivity, value-freedom, culture and politics. I will combine a close reading of the texts, using theoretical perspectives from recent science studies as a guide, with readings of secondary literature about Weber and his social-historical context. Three types of literature are used, that provide the following for the study:

- Weber's own writings: Primary empirical material.
- Science studies: Analytical perspectives and tools.
- Weber studies: Secondary empirical material (for contextualisation) *and* analytical perspectives.

I am not investigating a piece of scientific work, but a piece of methodology. This study is not doing sociology of knowledge, but sociology of *theory of knowledge* (epistemology). The process may analytically be broken down into the following steps:

Chapter 2: The construction of an analytical model showing four areas of different meanings of the term 'objectivity'. Two of these areas belong to the scientific process – *conduct* and *methods* – and thus clearly contain scientific values.

Chapter 3: A close description of Weber's ideas about objectivity, to see which parts of t he analytical model that apply. This will tell us which scientific values that Weber's objectivity can be subdivided into, and how these relate to each other.

Chapter 4: Reconstruction of the type of subject that may live up to the standards of the objective scientist. This is done by surveying what Weber says explicitly, and

which aspects of the subject his objectivity negates.

Chapter 5: Tracing the cultural, ethical and political connections to Weber's views of science and self. For this task I will mainly use secondary literature.

When scrutinising Weber's texts with newly developed theoretical tools, we will see in greater detail what it is that Weber *tells* us about the nature of science and objectivity (theoretical questions). When tracing the connections between Weber's theories and their context, we will see what the case study *shows* us about these matters (empirical questions).

Disposition

I have chosen not to have a separate section on previous research. To try to summarize the thousands of items written on Weber would be pointless. Even to select just the ones most relevant for the task ahead would require entire volumes. Instead, I introduce previous works in the appropriate place in the text, when I draw upon them. Chapter 2 could be seen as both summarizing relevant previous research in science studies, *and* doing preliminary theoretical work needed for the empirical investigation in the succeeding chapters. This chapter will outline the contemporary discussion on objectivity and scientific values, and provide tools which I will later use. A few theoretical perspectives will be introduced later when they are needed, but I have found it unnecessary and confusing to mention everything at once. Chapters 3 through 5 outline the empirical investigation of text and context, divided into the three headings of Science, Self and Society. These chapters gradually widen the scope of the investigation from the more scientifically internal to the more external. Each chapter focuses on a category which is important to Weber: Science, the self and politics. A fourth field of great importance to Weber is ethics, which is mentioned mainly in chapters 3 and 5. Finally, chapter 6 summarises the findings. This will clarify how Weber's vision of objectivity is connected to his understanding of science, self and society; how his methodology is part of his personal cosmology.

Empirical material

The main focus will be on the following texts: *Die "Objektivität" sozialwissenschaftlicher und sozialpolitischer Erkenntnis* (The "Objectivity" of knowledge in social science and social policy), *Der Sinn der "Wertfreiheit" der soziologischen und ökonomischen Wissenschaften* (The meaning of 'value-freedom' in the sciences of sociology and economics), *Wissenschaft als Beruf* (Science as vocation/calling), *Politik als Beruf* (Politics as vocation/calling).[3]

[3] I have chosen not to use the standard translations of these titles, for clarifying reasons. *Der Sinn der "Wertfreiheit"* is translated in MSS as 'The meaning of "Ethical neutrality" in sociology and economics'. I find this to be directly misleading, since Weber sharply demarcates ethics from values. Furthermore, it is impossible for the scientist to stay *neutral*, but he may abstain from passing judgements on values. See chapter 3.

The first two texts contain Weber's systematic treatments of matters of objectivity and value-freedom, even though he mentions these matters also in other places. These texts are considered central among Weber's methodological works. (See e.g. MSS v-vi) The two second texts describe how Weber conceives of the roles of the scientist and the politician respectively. They are included since Weber sees the scientist as well as science as a whole in contrast to the politician and politics. Since I am focusing on objectivity as practice, questions of understanding, explanation, causality and construction of ideal types lie outside the focus of this study.[4] When the secondary literature has pointed me to interesting passages in other places in Weber's works, I have often followed these clues.

As a help to understanding the original texts, I have read Swedish and English translations. As far as I can judge, the Swedish translations lie closer to the German originals in meaning and are therefore preferred over the English ones.[5] Apart from all the sections that I make references to, I have read the translations more closely than the originals, due to the time it takes me to read German. When citing, I have sometimes found the translations in MSS to be misleading and instead made my own.

Secondary literature: There is a very large number of publications about Weber. The texts that I have used the most are Boglind, Eliaeson & Månson (1993), Bruun (2007), Ciaffa (1998), Goldman (1988), Hennis (1994), Owen (1994), Proctor (1991), Ringer (1997, 2004). Further evidence and understanding has been gathered from Bosch (1962), Eliaeson (2000, 2002), Gouldner (1964), Honigsheim (1968) Lassman (2000), Turner & Factor (1984) and the companion edited by Turner (2000).

2. Objectivity today

In this chapter I will go through some of the contemporary research on objectivity and scientific values. The first section aims to achieve some clarity regarding what objectivity can be, and to construct an analytical model for later use. The second section outlines the connection between objectivity and the self as a moral entity, subject to active self-formation. It also aims to show how objectivity is internally related to fears of the intruding self and what bad science might lead to.

[4] For excellent studies on those topics see Ringer 1997 or Agevall 1999.
[5] I have encountered a number of problems in the translations made in 1949 by Edward A. Shils & Henry A. Finch (in MSS), but it would lead too far to go into that here. Just as an example, they sometimes translate 'Beruf' as 'professional task', thereby completely missing its existential and valuational dimensions as calling.

2.1 The abundance of objectivities

Within science there have always been debates over how to be scientific. In the 19th century, an increasing number of scientists came to argue for the idea that *good* science must be *objective* science. That 'objectivity' today has become more or less synonymous with 'good science' tell us something about their success. In order to make possible an investigation of objectivity we must not equate it with good science per se. The term is burdened with a lot of semantic confusion. 'Objective' is often used as meaning 'valid', 'rational', 'true' or 'real', or all at once. Common sense meanings of the term include meanings such as 'an account free from all subjective influence' or 'a representation of the true nature of things', or simply 'really real and not made up'. However, objectivity can be shown to stand for a specific *version* of scientific rationality, validity and good science. Not only that, it comes in different varieties, each with a history of its own. Historians tell us that 'objective' and 'subjective' have always been mirror concepts, although their meanings have changed drastically over the centuries. (Daston & Galison 2007) Originally, 'subjective' did not refer to individual subjects. It was not until the eighteenth century that 'subjective' acquired its present-day meaning of having to do with the single mind. (Lübcke 1988: 530) As an example from earlier times, Kant is clear to distinguish 'subjektiv' from 'privat', where the first refers to that which is common to *all* humans, and the second to the idiosyncratic and personal. (Liedman 2006: 239)[6] Exactly what criteria should be met for objectivity has differed significantly. The one thing most of its varying proponents agree on is that it opposes subjectivity. Subcomponents of objective behaviour have a mainly negative character. Their chief merit lies in them *not* being subjective, albeit in different ways.

> Objectivity is related to subjectivity as wax to seal, as hollow imprint to the bolder and more solid features of subjectivity. Each of the several components of objectivity opposes a distinct form of subjectivity; each is defined by censuring some (by no means all) aspects of the personal. (Daston & Galison 1992: 82)

As mentioned in the introduction, in recent years the concept has undergone a diversification. A growing body of work shows how several components and ideas have been discussed under the heading of 'objectivity'. The scientific virtue of objectivity can be subdivided into a whole set of scientific values. Different ideals of objectivity include different sets of guiding values that must be adhered to in order for scientific practice to count as objective. *Objectivity is thus not a single value, but a whole family of related scientific values.* As means of clarification, we could ask firstly *what* the potential candidates for being objective are; what types of things the concept may be applied to? Second, *how* can these be objective; what types of objectivity are there?

[6] Liedman tells us that Kant considered *taste* to be an example of something which is subjective but not private. (ibid.)

What can be objective?

R W Newell claims in *Objectivity, empiricism and truth* that objectivity refers to two areas, 'the status of things' and 'the quality of human behavior'. The first area is ontological and concerns the real *existence* of objects. In this sense, the term is used to denote that things exist independently of human minds altogether, alternatively independent of singular minds. The second area concerns a certain type of *conduct.* The term here has a wholly different meaning. To be objective in this sense is to act in accordance with a certain attitude or cognitive dictum: disinterestedness, impartiality, detachment, freedom from emotion, rationality, etc. (Newell 1986: 17) In *Rethinking objectivity,* Alan Megill sums up what has been claimed to be objective in science.

- The individual researcher
- Methods or models
- The results of knowledge production (Megill 1994b: 8)

Megill's first two points are both concerned with how science is done, i.e. with behaviour and not with ontology. Objectivity in these two is something that is *practiced,* not a property of things. The third area, results, are normally seen to gain their status of objectivity through the correct practice, i.e. correct scientific behaviour in methods and conduct. If we combine what Newell and Megill are saying, we get four areas that can be objective: *Things*, *scientific results*, *methods* and *researcher conduct*. 'Things' concern ontology, while the other three concern epistemology. Or put another way, 'things' can refer to any type of entity, while the other three in varying ways refer to science. The ontological sense is a general kind of philosophical objectivity, while the other three concern *scientific* objectivity. My focus in this thesis will be on one of these four, the practice of objectivity through correct *conduct* by the individual researcher; how objectivity is practiced by actual persons.[7] **[*Please see appendix*]**

Many discussants conflate ontological issues with epistemological ones, e.g. by indiscriminately referring to "the objectivity of science", speaking of existence of entities, truth, accurate representation and correct behaviour all at once. However, once we have separated these four areas it becomes clear that objectivity have different meanings in each of them. When referring to 'the objectivity of science' we must make clear whether we refer to results, methods or conduct, and also in what way. These areas may all be debated separately. As an example, it is far from obvious that a scientific account free from all subjective idiosyncrasies would necessarily capture the mind-independently existing properties of objects. It is further instructive to keep different *aspects* of cognitive conduct apart. Even if some of these may overlap, they can still be advocated separately. As we shall see later,

[7] When objectivity is mentioned in law or journalism it is almost exclusively in the meaning of conduct.

Weber's type of objectivity does not ban interpretation and presuppositions, but value-judgments, emotions and personal interests.

The historians of science Lorraine Daston and Peter Galison argue that most discussions of objectivity – whether the concept is defended, criticised or reconstructed – treat it in an ahistorical way. It is commonly viewed as if it has always been the same thing with the same connotations. Instead, in a number of works they show how objectivity as term, ideas and practices have emerged and transformed throughout history. Every version of objectivity belongs with specific methods, specific ethics and specific metaphysics. (Daston & Galison 2007: 124) Daston & Galison investigate the different senses of acting in an objective manner, and the types of selves these behaviours take part in shaping. The differing components of objectivity cannot only be distinguished through conceptual analysis but also through concrete separate histories of scientific ideals and practices. It is not only one concept with several meanings; it is in fact several concepts, which have come to be discussed under the same heading. (Daston 1991, 1994, 1995, Daston & Galison 1992, 2007) Just like Newell, they see the distinction between objectivity-as-existence and objectivity-as-behaviour as having essential importance for understanding the concept. If we keep ontological and epistemological meanings of the term apart, we are able to investigate them better.

Not just philosophers but also sociologists often use the term 'objective' in its *ontological* sense, where it is more or less synonymous to 'real' or 'given'. 'Objective' is used to denote that which does not rely on experience; at least not a singular person's. Some sociologists, such as Berger & Luckmann, use 'objective' in the sense of 'given', or 'independent of the singular individual'. (1966) To *make things objective* is commonly understood as making structures or other entities less dependent on *individual* minds. Firstly, this means increasing their stability and durability. Secondly, it means expanding their validity, thus making them more universal. Thirdly, it can mean expanding their existence making them more prevalent, as in the case of spreading a social institution.[8] Some theorists have instead preferred the term 'intersubjective'. It is used to denote that the existence of entities (or the validity of results) rely on human subjects, but only as a collective. The ontological sense of 'objectivity', which refers to properties of things, will be discussed no further in this study. The concern here is with Weber's prescriptions of objectivity, i.e. the prescribed cognitive conduct. Objectivity as a *methodological principle* is something which the researcher *follows*. It is not a property of things or results, but of the research practice itself.

How can it be objective?

To be objective is to keep the subject outside. What does this mean? What different meanings may be discerned in the bundled contemporary usage of the term? 'Objective' is sometimes

[8] We find varieties of 'making things objective' in e.g. Berger & Luckman 1966; Bourdieu 1999, Latour 1987.

used as a synonym for ‘real’ and sometimes for ‘true’, but it has distinct meanings of its own. The growing number of empirical studies into the origins of scientific objectivity link it to, among other things, disinterestedness, quantification, standards of evidence, self-inscribing instruments, procedures of observation, etc. (Daston 1992, 1994, 1995, Daston & Galison 1992, 2007, Dear 1992, Porter 1992, 1994, Proctor 1991, Shapin 1994, Solomon 1998) Apart from these more recent empirical works, there is of course a staggering amount of philosophical and methodological debate concerning objectivity. I have surveyed a sample of this literature to find different meanings of the term ‘objectivity’. (Haraway 1988, Kuhn 1977, Kvale 1997: 64-66, Lloyd 1995, Megill (ed.) 1994a, Newell 1986, Popper 1972, Potter 1995, Rorty 2009: 333-34, Skeggs 1997: ch. 1, Toulmin 2001: 96) Dividing these into the four areas distinguished above, I have constructed a conceptual family tree. This analytical model is meant to give an overview of some of the different meanings that at one time or another have been ascribed to objectivity. Each box should be understood as an *ideal type* of an aspect of objectivity, constructed as a theoretical concept since (as Weber says of ideal types) it captures elements of reality that are significant in their particularity (Eigenart). (GAW 192, VOP 141) In order to do this I have tried to analytically purify the different aspects. That is why neither of the popular candidates *detachment* nor *impartiality* are listed here. Both of them can be subdivided further, and they are too imprecise. Detachment e.g. applies to Non-intervention, Freedom from emotions, and Disinterestedness, and maybe even to Value-freedom. I am not claiming that this list is exhaustive, or the only possible way to categorise these aspects. Hopefully, this analytical model will serve to clarify what the theoretical issue. It will be used for examining Weber’s writings. **[*Please see appendix*]**

There is a clear value in keeping these aspects apart, since they stand for different values and lead to different practices. Critique against some of them completely misses the target when it comes to others. Neither is it given that they all belong together. Even if some components are closely related and partly overlapping, they may enter the scene independently. There is no single measure to tell which of these ideals of objectivity is “more objective”. The varieties of objectivity described here are not just more or less objective on a quantitative scale, they are *qualitatively different*. This has important implications for all talk of objectivity. In those cases where it is at all meaningful to compare or measure if one thing is more objective than another, it must be clarified which aspect among the multifarious meanings of the term that is aimed at. Following this diversification, objectivity appears as a rather nebulous concept with meanings that are more or less compatible or contradictory. The issues of critique, defence and reconstruction become reconfigured. One must clarify *what* components to reject or keep.

The two areas that concern the scientific process – conduct and methods – can both be described as scientific values. All of these describe things valued in ‘objective science’. When Daston & Galison discuss scientific virtues, they include values regarding both conduct and

methods. I believe there is a value in distinguishing these, since the conduct of cognitive practices mainly dictates what the researcher should *not* do, whereas methods are things that *should* be done. The first is a list of prohibitions while the second consists of endorsements. Furthermore, cognitive conduct directly concerns the *inner* behaviour of subjects – their virtuous character. Methods are in a sense external to the researcher since they are normally carried out with the help of tools, and do not concern morality in the same way. Weber's concept of objectivity mostly concerns proper *conduct*. It involves methods only to the degree that he discusses how to construct proper analytical concepts – ideal types. This is dealt well with by Agevall (1999) and Ringer (1997) and is not touched upon further here.

To sum up this first section, we have seen that objectivity has many meanings and stand for a whole family of scientific values. Some of these refer to the conduct of the researcher. Objectivity always has a mirror image in subjective behaviour that should be avoided. It comes with a (normative) ideal of the objective scientist, and the practices which this ideal researcher performs. Objectivity prescribes a certain type of subject who acts and thinks in the correct manner. The analytical model developed here will later be used to expound Weber's objectivity and its corresponding self.

2.2 The virtue of objectivity and the shaping of the scientific self

In this section, I will describe how ideals of objectivity are always connected to background assumptions of mental composition as well as ideas about virtuous character. A new conception of the self that developed in the 19th century gave rise to new epistemological anxieties, which objectivity was supposed to counteract. Ideals of scientific conduct shifted and a new scientific persona arrived on the scene: The objective scientist.

The virtuous self and the fear of bad science

Stephen Gaukroger writes that during the Enlightenment, the persona of the natural philosopher (scientist) changed. Science came to be seen as the sole bearer of the standards of rationality. Scientists came to monopolise reason, and be the only ones allowed to speak in its name. They could do so since they embodied an intellectual morality. Natural philosophers developed a special role as trustworthy witnesses. They were the sole interpreters of reason; once a privilege of the theologians. Along with the special standing of the scientist developed the idea that there was a specific *virtue* that set them apart from others: intellectual honesty. This had not been the case with the scholastic philosophers but was a new notion. (Gaukroger 2006) Steven Shapin argues that *trust* and *personal virtue* are essential components in modern science. (Shapin 1994, 2008)

From Gaukroger's and Shapin's historical point of view, it seems that the virtuous character of the scientist has always been an important part of science. Science does not only rely upon

impersonal methods. Also in the classical accounts of science by Max Weber and Robert Merton, the moral character of the scientist is important. There is a *scientific ethos* that dictates how sound science is practiced. However, it remains a bone of contention whether science can produce results that bear no trace of the persons involved.

Daston & Galison use the term *epistemic virtue* to capture the nature of scientific values. They function as regulative ideals for knowledge seeking, and guide scientific practice. Among these we find e.g. Truth, Objectivity, Certainty, Precision, and Replicability. The reason for calling these *virtues* is that they fuse a moral ethos with epistemology. The questions of correct conduct and proper science are intrinsically linked. 'Ethos was explicitly wedded to epistemology in the quest for truth or objectivity or accuracy. Far from eliminating the self in the pursuit of scientific knowledge, each of the epistemic virtues depended on the cultivation of certain character traits at the expense of others.' (Daston & Galison 2007: 204)

Just like moral virtues, the scientific ones aim at the same ultimate goal (in this case not The Good but Knowledge), but may actually conflict in concrete situations. There is no one way of combining and weighing them against each other, just as in the case of moral virtues. If a result is made more Precise it may be less Replicable. Similarly, to aim for Objectivity is sometimes done at the expense of Truth. Many acknowledge that scientific objectivity does not guarantee truth. Daston & Galison go a step further and show how it can actually stand in *opposition* to truth. As an illustration, when objectivity developed as a virtue of its own in the 19th century, it was explicitly opposed to the older ideal of unveiling the essences of nature to find the Truth. The new-styled objective scientists argued against the virtues of the Enlightenment wise sage and his unique skills, whose knowledge-seeking they deemed as far too subjective. (ibid. ch. 4)

Scientific virtues have separate histories and are stressed differently in different scientific communities and cultures. (ibid. 33) Epistemic virtues tell the researchers how they should behave in order to seek knowledge. How to remove obstacles to knowledge? Objectivity is one such answer, or rather, a whole family of answers. Many contemporary discussions of objectivity take for granted that it necessarily has to do with truth and certainty, but this has not always been the case. Even though matters of Truth, Objectivity, Certainty, Validity, etc. are often conflated, these ideals can be traced back through different historical paths. As we shall see, also in Weber's usage many meanings are layered upon each other.

The specificity of scientific behaviour lies not in a descriptive or instrumental methodology, but in an intellectual morality. (Gaukroger 2006) Objectivity is not so much about methods as it is about normativity. One cannot understand the calls for objective behaviour without seeing that those prescriptions are not pragmatic how-to advice, but *moral* prescriptions. The

scientific self stands for a certain morality, an ethos. (Daston & Galison 2007: 39-40) As mentioned in the introduction, some scholars argue that epistemology has always been driven by morality and that it is strongly linked to moral concerns, even fear. Many of these fears are at bottom political and/or existential. Methodological and political concerns sometimes appear as two sides of the same coin, since they both derive from the world view of the scientists. In every epistemology there are obstacles and threats to knowledge. Methodology provides the answers to how to overcome those obstacles and remove those threats. Every methodology has its virtues and its vices. This should be understood quite literally. What happens if science is not performed properly? Which normative concerns motivate a specific methodology? How to carry out proper science? That depends on what threats need to be avoided. How to be properly scientific? That depends on what virtues and vices the methodology embodies.

That proper science is motivated not only by rationality but also by values is in line with what contemporary research in cognitive science shows. Through drawing upon the quickly expanding bulk of case studies and research within cognitive science, Antonio Damasio shows how rationality is unable to motivate anything by itself. Contrary to the received view that emotions are only in opposition to rationality, cognitive science demonstrates how feeling and rational thought operate together. Emotions are necessary to motivate rational thinking. (Damasio 1999) Pure rationality does not provide the *motivation* for anything, only values and emotions do. Whenever someone says 'It is important that we do x', there is a value or an emotion motivating x. Presently there is an emerging field in sociology studying how emotions are present in all aspects of social life, both in shaping and motivating our projects. (Wettergren, Starrin & Lindgren 2008) Scientific methodology is no exception to this. Any specific methodology embodies various desires and anxieties, specifically regarding the nature of knowledge and scientific practice. By conceding this we are certainly not giving in to relativism or "anything goes". Also from philosophy we may draw some support for this. Charles Taylor shows how our emotions may be rational as well as irrational. Some of our feelings can be rational. (Taylor 1995) A dividing line between the rational and the irrational is not identical to the line between thoughts and feelings.

The question still remains what the relation is between scientific and cultural values. Can the intellectual morality which sets science apart be understood as arising only from *within* science? Is it shaped mostly by concerns for truth and rationality? Does the outside of science contribute to shaping scientific values in any other way than just to create fertile conditions for rational science? Can the surrounding society only help or hinder good science, or does it also affect the *form* of science, i.e. *how* good science is performed?

Objectivity as the moral of self-restraint

Daston & Galison tell us that objectivity rose to prominence in the mid-nineteenth century. The main epistemological worry for objectivity is the intrusion of the researcher's own self. What distinguishes objectivity as an epistemic virtue is that it aims for the elimination of subjectivity. The self should not intervene into the scientific process and interpret, add or evaluate. The scientific results should bear no mark of the specific individuals who carried out the research. All idiosyncracies should be eliminated. Objectivity paints an ideal picture not only of scientific practice but also of the self who performs this.

Changing conceptions of the *scientific* self is always related to other views of self present in the same era. Objectivity as specific scientific virtue was unthinkable before the conception of the human self as *subject* had emerged. To contemporary ears this may sound strange, but the self has not always been conceived as a subject. 'Subject' is a 19th century notion. (Seigel 2005, Mauss 1985) This new type of self is unique and has depth: *subjectivity*. Daston & Galison describe this new self as dynamic and centred on the will. Deep inside there are inner conflicts which the self has to negotiate. Irrationality, imagination and value judgments are threats to keep at bay. The subject's main characteristic is that it is *thinking* and *active*, struggling for control and self-discipline. The ideal of objectivity presupposes a view of the self as idiosyncratic and unique. This subject could run amok and disturb the passive observation and rational cognition of the scientific process unless the will tightly constrains itself. The view of the self as a dynamic will-driven subject can be opposed to e.g. the Enlightenment self, whose main characteristic was *perception*. This self was a loose aggregate of mental faculties, ruled by reason. Its main epistemic risk was not to exert too much influence on the scientific process, but too little. The Enlightenment self was seen as at risk of becoming too impressionable and passive. Later when the self becomes posed as the main obstacle to scientific knowledge, objectivity as a scientific virtue is articulated, to provide the remedy and foster the scientific self. (Daston & Galison 2007: ch. 1 & 4) The polar opposite of the scientist is the artist. In the field of art, we get the artistic self and in the field of science we get the objective scientific self. These are different responses to the more general shift in eighteenth-century self-conception. Both share the underlying conception of the self as subjectivity, although the artist endorses his subjectivity whereas the scientist tries to restrain it. Imagination, passion, and to go where the inspiration leads were virtues for the artist but vices for the objective scientist. (ibid. 37-38, 246-47)

What is specific about the scientific ideal of objectivity is that it has a mainly negative character; its most striking feature is to negate the human subject. Most usages of the term signify a way and a will to keep the individual subject form interfering with the knowledge process. The subject is to be disciplined and kept in check. This requires strong willpower. Daston & Galison describe the ideal of objectivity as enforcing a 'will to willessness'. The subject must not be active and engaged, but restrain itself and remain a passive observer. In

descriptions of objectivity there are many commands to *abstain*, from judgements, emotions, pre-conceived notions, interpretations, etc. To follow the virtue of objectivity is to refrain from doing a whole list of things. Talk of objectivity is often highly morally charged. It does not consist of technical and methodological advice but of ethical commands: Thou shalt not! The researching subject must follow a harsh regime of self-discipline. It must stay in control of itself, actively engaged in not being engaged. The paradox here is that for knowledge to be more objective, the researcher must pay enormous concentration to its antithesis – the subject. In the practice of objective science, careful attention is paid to the researchers own self. The subject must carefully and continuously negate itself. Objective knowledge production is a painstaking form of self-management. This takes place mainly through a set of cognitive practices, mostly aimed at abstinence, control and self-negation.

'Epistemic virtues earn their right to be called virtues by molding the self, and the ways they do so parallel and overlap with the ways epistemology is translated into science.' (Daston & Galison 2007:41) Epistemology consists not only of free-floating philosophical analysis. It becomes translated into scientific practice. In what ways are ideas about objectivity translated into ways of working, thinking and going about the daily life as scientist? Objectivity prescribes a list of dos and don'ts. It becomes not only an abstract ideal but a code of conduct. Some methods are objective and should be used, while others are not. Some behaviour and thinking is in accordance with objectivity, while some is forbidden and should be avoided. So the ideal of objectivity becomes translated into a set of directives. Do this! Don't do that! Avoid this! Refrain from doing that! Objectivity thus shapes scientific practice. Practice in turn, is essential in forming the kind of persons we come to be. Norms and practices are part of what constitute us as persons. To tell scientists to behave objectively is to command them to behave in a certain way, to think correctly, and to be a specific type of person. To do what objectivity prescribes is at once to practice objectivity and to exercise the scientific self. The ideals and practices of objectivity contribute to shaping specific *personas* – ideal types of the self – as well as shaping the actual people striving to live up to these personas. With the rise of objectivity as a scientific virtue, a new type of person arrives on the scene: The objective researcher. It is a new *kind* of person, a new resource for production of human subjectivity. (Hacking 2002: ch. 6) With the emergence of objectivity a new human entity is thus created.

To sum up, objectivity presupposes a certain view of the human self, which gives rise to a moral problematic. The virtue of objectivity gives an answer on how to overcome this obstacle to knowledge. A certain type of conduct is needed in order for the subject not to pose a problem. Thus, it fosters a certain type of self through the self-discipline of objective practice. It is plausible to believe that these techniques of conduct and action also shape the selves of those who practice them. As Daston & Galison put it, epistemic virtues mould the self. What kind of self is the problem which Weber's objectivity strives to eliminate, and what

kind of self do his prescriptions mould? To answer this we must first take a closer look at what exactly Weber says on the matter.

3. Science: Weber's scientific objectivity

If objectivity has many different components and is not a unified concept, which parts do we find in Weber? This chapter will first outline how Weber generally conceived of science and its relation to culture, before focusing in on the design of Weber's objectivity.

3.1 Science and culture

Weber's usage of the terms 'objective' and 'objectivity' (as in many other 20th century usages) is a bundle of many different meanings. Sometimes it refers to conduct, sometimes to the world, sometimes to validity, sometimes to a perspective from nowhere. Several of these meanings Weber deems to be impossible, which is why he always writes the term within citation marks.[9] The dominant meaning of objectivity as 'independent of everything subjective' is something which Weber does not believe in. But there is one type of objectivity that is possible: the ideal of value-freedom. The more metaphysical versions of objectivity are unfounded, but it is possible to *behave* in a value-free manner. That is as much objectivity as we can hope to achieve. So even though Weber uses the adjective 'objective' in several different ways, there is a more or less distinct concept of scientific objectivity to be found. It needs however to be differentiated from the occasions where the term is used more generally, referring to validity, existence, truth or facticity.

One of the main sources for Weber's ideas on objectivity is his 1904 essay *The "Objectivity" of knowledge in social science and social policy*.[10] Hans Henrik Bruun remarks that this essay is mostly about how objectivity is *not* to be understood: it focuses on subjectivity. (Bruun 2007: 28) This squares perfectly with what Daston & Galison say about objectivity in general. The general form of the virtue of objectivity is that it negates subjectivity and is defined in direct opposition to it. Objectivity as scientific virtue has direct bearing on the self by banning parts of it from the scientific process. The battle for objectivity is obsessed with the dangers of subjectivity. (Daston & Galison 2007) This is very true also regarding Weber, although he does not oppose the same aspects of subjectivity as naturalist versions of objectivity do. He argues that science may never be objective in the strong sense, since it always depends on subjective premises: A culturally shaped perspective, and an interest in the world, given by our cultural values. There is no single "objective" scientific perspective, especially not one

[9] In German, no differentiation is made between 'citation marks' and "scare quotes".
[10] In Weber's time, the word 'Wissenschaft referred to all forms of systematic knowledge'. (Ringer 1997:8) I will here consistently translate it as 'science'.

free from culture. The very activity of science depends on a previous value-choice: That truth and scientific knowledge are important and worth striving for, in the calling of the scientist. Furthermore, problems to be investigated are selected on the basis of values. These are the inevitable subjective prerequisites for any scientific enterprise. Science may nevertheless aim for universal validity, in both its empirical investigations and its logical analyses. (GAW 155-56, VOP 104-05)

Strictly speaking, no "objective" analysis is possible, i.e. an analysis that would organise knowledge of phenomena into a system of scientific laws. (GAW 180, VOP 128) Neither can there be an "objective" analysis independent of perspectives that select and organise phenomena. (GAW 170, VOP 119) Weber strongly rejects one of the dominant ideas about what objectivity is; that of transcendence of individual viewpoints, not having a perspective, objectivity as a "view from nowhere". This idea originated in 18th-century moral philosophy, and later spread throughout the sciences. (Daston 1992) Weber's objectivity makes a sharp break with this. We always see from a viewpoint (Gesichtspunkte). (GAW 170, VOP 119) Science cannot hope to achieve a unique and common perspective for all rational beings. There will always be a plurality of starting points from which to investigate reality. Human beings are cultural beings, with specific cultural perspectives and values. We see and analyse according to what we judge as relevant and important, i.e. what matters to us, what the *problem* in question is. It is the culture in which we live that gives us the understanding in which certain aspects of reality become interesting to us. This is what Weber calls the *value-relevance* of science. Something becomes a scientific problem only in the light of a culturally shaped knowledge interest. (GAW 161, VOP 110)

Value-relevance means that scientific problems and the viewpoints from which we analyse them depend on subjective factors; i.e. factors which are specific for a group sharing the same culture. 'Objective' would entail a universal perspective, same for everyone. Today, we see that the standard 20th century view of objectivity often conflates conduct, results and ontology, speaking of objectivity as at the same time freedom from perspective, intersubjective sameness, accurate representation and subject-independent existence. Weber rejected all these kinds of objectivity. Nevertheless, he saw scientific results as valid for all those *who value the truth*. (GAW 184, VOP 132) There is no unconditional "objective" validity, nor are there any "objective" values. To see scientific truths as *valuable* is a product of specific cultures. (GAW 213, VOP 160) Values are always cultural and part of a world view. The kind of objectivity that is attainable has to do with practicing value-free science.

To return to the analytical diagram over versions of objectivity (see appendix), we can see that Weber's scientific objectivity concerns the researcher's behaviour, or cognitive practices. In Weber's account, scientific objectivity is not primarily about knowledge. It is a mistake to

assume that knowledge itself could be objective, in the sense of independent of all values and free from all individual contingencies. (GAW 185, VOP 134)[11] The only way that results are objective is in their culture-free and universal validity. (GAW 155, VOP 104) Apart from that, 'objectivity' as Weber's uses it generally applies not to scientific results but to the researcher's conduct. Furthermore, the goal of science cannot be to seek knowledge without preconditions. Knowledge cannot be 'a "presuppositionless" image or representation (Abbildung) of "objective" facts'. (GAW 192, VOP 141)[12] We inevitably bring something into the knowledge-process and cannot merely reflect or represent a reality which precedes our conceptualisations. Our knowledge cannot be copies of the world and it is chimeric to assume that we can simply see things "as they are in themselves". The knowledge we produce is always conceptualised *through* our cultural significances and there cannot be a unique scientific perspective. Weber says we can only turn our attention to *fragments* of the chaos that is reality. When we produce knowledge about reality, we categorise it in a culturally specific way, and bring order to chaos. (GAW 177-78, 207, VOP 126, 154-155) This can be done in several ways, and scientific results will not converge on one true account. However, even though knowledge may be sought from many viewpoints and is always an incomplete picture of the world, the results may be universally true and valid. For all those who value truth (and utilize reason), scientific results are necessarily valid. (GAW 184, VOP 132) In order to attain this validity and produce true knowledge, it is important that the scientist stays objective and also constructs analytical categories in a logical fashion.

Values in the scientific process: Weber's version

Problems, perspectives, selection and hypotheses	Scientific practice	Results	Application of results
Value-relevant	Value-free	Value-free	Guided by values

Culture and values gives us the problems to investigate and the concepts to start out with. Once the scientific investigation has started, values should be kept outside of the process.

As cultural beings we always bring our culturally shaped perspectives with us. Out of the infinity that is reality we select those parts that are relevant to us given our culture and values. Or rather the other way round: We find ourselves in a situation where parts of reality have been made significant to us. We may alter these significations, consciously look for other parts of reality, or create new concepts. Culture may change, but for us as human beings there is nothing outside of it. A science entirely free from culture would be a contradiction in terms. Our concepts capture those fragments of reality which are significant to us. (GAW 175, VOP 124) Our interest in reality – and in knowledge – is guided by values and concepts. This

[11] Hence the scare quotes in the title of the Objectivity essay: "Objektivität"
[12] '"voraussetzungslose" Abbildung "objektiver" Tatsachen'

means that there is a thin line separating science from faith. The categories with which we structure reality are subjective. Categories come with our language, which is a cultural product. (GAW 213, VOP 160) Culture may be understood as a specific perspective on the world; a relation to it; a certain way of interacting and making sense of it. Culture is the form through which we live in the world. It directs our interest to the world in historically specific ways. A transcendental presupposition of the cultural sciences is 'that we are cultural beings, endowed with the capability and the will to consciously take a stance towards the world and to invest it with meaning.' (GAW 180, VOP 129, my translation)

It is through cultural significance that the infinite chaos of reality is organised and given meaning. Weber says that any event in reality is caused by an infinite number of causal processes. (GAW 184, VOP 132) Fritz Ringer puts Weber's view thus: 'The world of the cultural and social sciences is an infinitely complex network of causal relations among particulars.' (Ringer 1997:4). That is why there can be no definite set of "scientific laws" from which reality can be deduced. (GAW 172, VOP 120) A scientific perspective allows us to select some factors that seem relevant to us, given our values and interests, out of the infinite manifold that is reality. What allows us to bring order to the chaos that is reality, is the fact that in every single case, only a small part of reality has meaning and is of interest for us. (GAW 177-78, VOP 125-26) Therefore, not even the tiniest section of reality could be exhaustively described, since for any event both the *number* of causes and the *types* of causes are infinite. (ibid.) A specific scientific study cannot expect to be "exhaustive". As an example, just because *The Protestant ethic and the spirit of capitalism* had focused on more "idealistic" factors of explanation, that did not preclude the validity of explanations of the same process using economic or material factors. Rather, different scientific perspectives should be seen as complementary. They all highlight aspects of reality which are significant in their peculiarity. They tell us meaningful true things about the world, but there is no way to tell it all. Weber says that scientific explanations are necessarily "one-sided" and no single perspective can lay claim to the whole truth. (GAW 170, VOP 119) Knowledge originates from a viewpoint. (GAW 181, VOP 129)

Weber sketches a kind of *scientific pluralism*, where different viewpoints give different partial answers. Yet, for anyone who understands the questions and wants to seek the truth, scientific results are necessarily valid. Rationality is the same for all human beings regardless of culture, even though not all use it as much, and that is what allows for universal validity. (GAW 155, VOP 104) Scientific knowledge may achieve 'objective' validity in the meaning of universal validity. That validity rests upon the presupposition 'of the *value* of that truth which empirical knowledge alone is able to give us.' (MSS 110, GAW 213) It is possible not to value truth at all. Other cultures may value other things, but what is distinct about the West is that we have come to value truth and rationality much more.

In order to explain the complex causal processes in society, human subjects need to be actively interpreted. Weber's methods require that the scientist empathises with the individuals under study enough to correctly account for their motives and ideas. To accomplish this feat of understanding (Verstehen) the scientist does not only have to *interpret*, s/he must also actively pass (rational) *judgements* about what is true. The researcher cannot just neutrally and passively register what is going on. Weber's science is very far from the type of empiricist ideal which desires non-theoretical and judgement-free observations. Not only does Weber see theoretical presuppositions as unavoidable, he also sees observations as ordered according to our concepts from the very beginning. Unlike the earlier empiricist version of objectivity, the scientist has to use her own judgement (Urteilskraft) and actively *intervene* into the process. Therefore, the social scientist cannot remain passive and detached. Weber entirely rejects the empiricist view of the self. There are some clear Kantian traits in the self: The scientist selects phenomena and shapes them through cognitive and conceptual categories. Weber deviates from Kant in an important aspect: He sees the (linguistic) categories that organise phenomena and structure our experience of the world, as culturally variable and in this sense subjective. We structure our perception of reality through our cultural value-orientation. (GAW 177-78, 180, 213, VOP 126, 128, 160) There can be no neutral or passive perception of sense experience. This is why the social scientist must put something of herself into the process, using imagination, interpretation and judgement.

However, only the rational and theoretical aspect of the self is allowed into the scientific process. The evaluative[13] and passionate aspect needs to be restrained and controlled. Judgements made by the rational aspect are necessary, while those by the evaluative aspect are prohibited. Furthermore, culture can only partially be quantified. Even if statistical methods may be of use, culture possesses essentially distinguishing properties, making them unfit to be studied only with methods from the natural sciences. Cultural reality is dynamic and forever changing. Society is historical. As culture changes, our interests and the ensuing scientific problems will change. There are in principle an infinite number of truths to tell about the world, so we should not believe that science can be completed, or turned into a system which explains the world. Furthermore, as culture changes, it not only changes our problems but also the very reality which we seek knowledge of. Unlike knowledge of nature, knowledge of culture is more bound to a specific era and location in its applicability. Results may not be generalised too widely, neither in time nor space. Therefore, as culture changes, our concepts, problems, and explanations have to change with it. (GAW 213-14, VOP 160-1)

[13] The term normally translated as 'evaluative' in Weber's texts is the German 'wertende' (Swedish: 'värderande').

Social sciences must be empirical *sciences of concrete reality* (Wirklichkeitwissenschaften). (GAW 170, VOP 119) They study the *particular* things that actually exist; historically specific phenomena (cultures, societies, events, religions, institutions, economic systems). The aim is to understand the real causal processes that occur in the world and provide a 'causal explanation of an individual fact'. (GAW 177, VOP 126) In Ola Agevall's words, sociology is a 'science of unique events'. It answers questions of how unique social phenomena became the way they are. (Agevall 1999) To trace the causal histories that made things the way they are, we need to combine interpretative hermeneutic methods (Verstehen) with others. Weber distinguishes sciences of concrete reality from *sciences of "laws"*. The latter aim at constructing a system of scientific laws from which it would be possible to "deduce" reality in a deterministic fashion. Legitimate examples of these are found in the natural sciences, whereas in other areas they are problematic. Such systems of laws may be coherent but sometimes have very little to do with reality, economics being the prime example. Economists aim to find general laws governing human behaviour. This is an improper aim for any science studying human affairs and stems from a misunderstanding about the nature of their study object. (GAW 170-72, VOP 119-122)

Imagination was banned from the objective natural sciences since it was seen as *adding* something to the picture. From an empiricist point of view this was a deadly sin, since it brought part of the subject into the object: The use of imagination is an *intervention* from the subject of the scientist, making the observation subjective and invalid. Weber on the other hand, subscribes to a more Kantian view of the self where imagination (Vorstellung) is necessarily a part of shaping our observations. We need an imagination (Phantasie) that is *trained* and *oriented towards reality*, able to judge whether our concepts are adequate. (GAW 194, VOP 142) Observations cannot mirror reality as the empiricist would hope. Our concepts are constructed on the basis of our culture and values and so cannot correspond to an independently existing reality. To believe so is to misunderstand the basic human condition. Weber can thus be said to take Kant's metaphysics and transform it into a culturally sensitive form. Different cultures will perceive reality differently. That is the essence of what Weber call value-relevance; we select and conceptualise parts of reality because of the way that our world view and values are. (GAW 161, 175-78, VOP 110, 124-126) We also need imagination and inspiration to come up with new hypotheses and ideas, and to formulate new questions. (GAW 589-90, MSS 16-17) In this respect, personal qualities make a difference in science also when it comes to the backgrounds of scientists. As an example, those having political convictions different from the majority of scientists may be better equipped to spot assumptions that are taken for granted and seen as self-evident. They may also come up with new hypotheses and perceive unorthodox problems, thus furthering the advancement of science. (GAW 496, MSS 7)

3.2 Objectivity as value-freedom

To be *disinterested* means not letting personal interests affect judgement. The notion of disinterestedness has its origin in 17th century moral philosophy and law. In the 18th century it becomes imported into science and is advocated as an important virtue. From the mid 19th century it is absorbed into discourses of objectivity and from then on seldom advocated on its own. (Dear 1992) The German language has no clear equivalent to the term. It is nevertheless clear that Weber advocates disinterestedness. In several places he argues that the scientist must not let personal interests and personal values affect scientific judgement. This does not capture the whole meaning of objectivity as value-freedom.

Weber's form of objectivity contrasts in many ways both with the two types that were predominant during the 19th century. Daston & Galison coins the first *aperspectival objectivity*. It aims to eliminate the individual point of view (which Weber does not) but also for disinterestedness. The second, *mechanical objectivity*, aims to eliminate human intervention by suppressing all active aspects of the self except calculation and observation. Weber explicitly rejects such a view. The similarities that these types nevertheless have in common with Weber is the stress on disinterestedness and value-freedom on the one hand, and strict self-control and will to willessness on the other. Writing from a later point in time, Weber has a different understanding of the human self. The earlier naturalistic versions wanted to gain a culture-free viewpoint or make scientific work mechanic and free from imagination, interpretation, and (rational) judgement. This does not square with Weber's culturally informed view of the human subject. In many ways, his version of objectivity has close affinities with the scientific virtue which historically develops later than objectivity: *trained judgement*. According to the virtue of trained judgement, an entirely objective process was not the main goal of scientific inquiry. Just to produce objective accounts free from often made the results less relevant and interesting. Instead, the researcher needed to form qualified judgements that came closer to the truth. *Skill* was necessary to correctly interpret the phenomena. The interpreter always brings something with her into the process. (Daston & Galison 2007: ch. 3) This comes very close to what Weber is saying, and his ideal of good science can be seen as a blend of objectivity and trained judgement. Chronologically, he is right in between the two. His ideals are in some ways part of a larger shift within the sciences in general, but the views on value-freedom and his separation of science from politics are new.

Similar views on value-freedom were expressed at the time by Weber's friends and colleagues Ferdinand Tönnies and Werner Sombart, although Weber's account was the most widespread and he was the one who most fiercely debated the issue publicly. (Proctor 1991) Objectivity as value-freedom must not be confused with complete neutrality. As a *person* it is impossible to be value-free. In matters of value one can never avoid having a personal

standpoint. When assuming the role of the scientist, these must be kept in the background through strict self-control, in order to keep thinking, description and practice as value-free as possible. Scientific objectivity shall not be confused with lack of personal views or conviction. The scientist too should follow personal ideals in his life, but be very clear about not mixing them up with science. He should not be a person without values but a person who does not portray his values as scientific. (GAW 157, VOP 106) Furthermore, every action entails taking a stand for certain values and against others. (GAW 150, VOP 99) What one *can* avoid is portraying one's values as having scientific support, or as being "the standpoint of science". No world view (Weltanschauung) can be deduced from science, since a world view always contains evaluations/opinions (Wertungen). (GAW 154, VOP 103) Evaluations (value-judgements) are always political since they take a standpoint on what ends are worth pursuing. There is a logical gap between facts and values. *Within* the sphere of science, the researcher stays neutral, at least in practice. The scientist as scientist stays silent on normative matters and does not let them affect the work. In the political sphere on the other hand, it is one's *duty* to express personal values and to engage in debate over them. (GAW 601, VOP 27) It was only in matters of pure facts – how to draw empirical and logical conclusions from empirical data – that it was possible to hold a "purely" rational position. However, in any question of culture or politics – of what was valuable, relevant, important or desirable – one could never be neutral. Therefore the scientist must abstain from saying anything with regard to these matters, unless he explicitly stated that he was now giving an un-scientific value judgement. Scientists only pass *rational/theoretical* judgements about facts, not *practical* judgements about values and actions. These are not to be confused. Neither values nor emotions should affect scientific judgements.

A few similarities may be found between Weber's view of science and the positivist philosophy of science that was later to develop in Vienna and Britain. Logical distinctions and clarity are of utmost importance. Mixing logically distinct categories and creating confusion are major sins. It is extremely important to demarcate science from non-science, and to maintain the autonomy of science vis-à-vis other parts of society. Even though Weber's position has often been labelled 'positivist' due to its stress on objectivity, this is clearly misleading and has more to do with Talcott Parsons' *usage* of Weber than the actual texts themselves. (Eliaeson 2002) Weber does not share the empiricist assumptions about the atomistic nature of sense impressions or the possibility of theory-free perception.[14]

Apart from the above mentioned, the kernel of (half)truth in the positivist accusation is that Weber explicitly upholds the Humean distinction between facts and values. He sees them as clearly distinct logical categories that should not be confused. Values are to be kept outside of scientific practice. Scientists may empirically investigate what values people hold, and in

[14] On positivism, see Hacking 1983: ch. 3

what logical relations different standpoints, judgements and value-axioms stand to each other. That is all. There can be science *about* values but not a science *of* values. Values are always subjective and depend upon individual existential choices. Science cannot prove the validity of values, but may nevertheless investigate values empirically and logically. There are four ways that science may clarify issues of values:

a) Reconstruct the value-axioms behind concrete evaluative statements.
b) Deduct implications from value-axioms. What follows logically from them?
c) Determine the factual consequences of putting value standpoints into action.
d) Uncover new value-axioms. (GAW 510-11, MSS 20-21)

Weber said in debate that 'mixing a statement of what should be, into scientific questions is a thing of the devil.' (GASS 419)[15] According to Hans Henrik Bruun, Weber only has *one* theoretical argument for the principle of value-freedom: that the spheres of science and values are logically different, of completely distinct sorts altogether. (Bruun 2007: 63) Ringer states that 'the logical distinction between descriptive and prescriptive propositions, is and ought' was '[t]he conceptual core of Weber's case for value neutrality' (Ringer 2004: 111) Weber sees facts and values as logically 'heterogeneous' and belonging to separate categories. (GAW 509, MSS 20) This logical fact makes Weber advocate a certain conduct for scientists: They should not mix up the two. Weber's task was one of *clarification*, of making clear to people which ultimate values that were logically entailed by their positions and statements. Scientific analyses of values were meant to facilitate the making of value-choices. (GAW 507-8, MSS 18) David Owen has shown that Weber's own analyses could be understood as such attempts at expanding our self-understanding and autonomy. (Owen 1994)

Weber allows value-judgements and value-laden concepts in a scientific work only *if they are clearly declared as such*, so that no confusion arises. One should not use a value-laden term and pass it off as a scientific judgement or as a neutral concept. Doing so would be to ignore and deny the inevitable struggle over values. That would falsely portray value-laden terms as merely descriptive, instead of acknowledging their association with a specific standpoint and a certain world view. As an illustration, during a meeting of the Verein für Sozialpolitik in 1910, Weber is reprimanded by some of his few like-minded colleagues for using the term 'magnificent' (grossartig). He admits that this word contains a value-judgement (Wertung), takes it back and switches instead to the value-free term 'interesting'. (GASS 454) So here we have an example of a term that was considered value-free. Weber holds that scientific concepts stem from our values and interests, yet argue that we must not pass value-laden terms off as scientific concepts. However, it seems to follow from the tenet of value-relevance that *all* concepts are value-laden. Weber seems uneasy to draw this conclusion. Jay Ciaffa

[15] 'das Hineinmengen eines Seinsollens in wissenschaftliche Fragen ist eine Sache des Teufels.' (GASS 419, my translation)

argues that after the later criticism from Habermas and others we can see today that Weber was mistaken on this point. He should have conceded that all concepts are value-laden. This does not invalidate the call to avoid excessive value-judgements. (Ciaffa 1998)

An interesting clue to this problem may be found in the prime examples Weber gives of value-laden concepts: 'productivity' and 'national wealth' (Volkswohlstand). (GAW 118, GASS 418-25) Willhelm Hennis points out that Weber stresses that these value-laden terms hide value-conflicts. An unqualified usage of the term 'productivity' assumes only the interest of the entrepreneurs as a general interest. It hides the fact that the economy contains conflicting interests and that what is productive for some may damage the interests of others. These terms portray as unequivocal something which actually stands for certain goals at the expense of others. (Hennis 1994)

What is problematic about those concepts that Weber so fiercely criticises, is not only that they present as "merely scientific" something which is in fact the result of a value-judgement, but also that they *hide* this fact about themselves. It seems as if value-laden concepts have two aspects: They are *evaluative* and they *conceal conflicts* of values and interests. To expose conflicting interests and values present in the concepts seems to be a slightly different point than demanding that only descriptive terms are used in science. In 1910 it was possible to state that 'magnificent' is a value-laden term, whereas 'interesting' is value-free. Today, after a whole century preoccupied with studying language, this distinction no longer seems tenable. Many now argue that every description is also evaluative and that the very idea of a neutral description-language free from valuations has lost credibility. (Kincaid, Dupré & Wylie 2007) There exist a growing number of case studies that show how various scientific descriptions are value-laden and connected to world-views and values. (see e.g. Martin 1991, Dupré 2007, Longino 1990, Haraway 1990)

According to these researchers, the fact that scientific theories can be shown to carry implicit value-content, does *not* in itself invalidate these theories. However, the value-content of science may have important consequences for matters of policy and practical action based on these theories. Many theories or methodologies also serve to legitimise or normalise existing relations of power, performing what Karl Mannheim called an 'extra-theoretical function'. (Hacking 1999: ch. 2) This may or may not be problematic. In any case, since so many decisions today are guided by scientific knowledge, it is highly relevant in to see which value-assumptions that are already present in concepts and descriptions.

Hilary Putnam shows how the distinction between fact and value should not be understood as a *dichotomy* (mutually exclusive categories), but how every factual description is more or less

evaluative. Language cannot be neatly sorted into factual propositions and value judgements respectively. This has important consequences for our understanding of Weber:

> But what Max Weber failed to acknowledge was that while indeed the answers to a scientific question must never be dictated by one's value system, the terms one uses even in *description* in history and in sociology and the other social sciences are invariably ethically colored; this is nowhere more true than in the case of the terms Weber used to describe his ideal "types". (Putnam 2002: 63)

Even though Putnam misses the specificity of Weber's account and almost reduces his value-freedom to its component part 'disinterestedness', we may draw from his insights about language. Every word carries value-connotations. Think e.g. of the varying political implications of describing human beings as 'persons', 'individuals', 'consumers' or 'citizens'. Value-ladenness applies also to the very terms 'objective' and 'value-free' themselves. To many practitioners of science, they have very positive connotations. To say that of a scientific result 'That is not objective!' is highly evaluative and charged.

If we accept the view of language that Putnam, Ciaffa, Dupré and many others today hold, it appears as if two of the aspects of value-freedom here stand in opposition. Value-freedom in the form that Weber gave it holds an intrinsic tension. By claiming that only *some* terms are value-laden, it actually hides the values present in other "scientific" or "merely descriptive" terms. From a contemporary point of view, it thus seems as if the ban on value-laden terms is counterproductive, since it allows some terms and not others, while at the same time hiding the fact that these are also value-laden. This has the paradoxical effect that Weber's version of value-freedom contributes to doing precisely what it was meant to prevent. Nevertheless, even if we grant that language cannot avoid being evaluative to a degree, the second point still stands. It is possible to admit that all terms are value-laden while still claiming that it is illegitimate to *hide* conflicts between values. Such a position could e.g. argue for the open acknowledgement of the values present in the terms used, trying to raise awareness that language is not only theory-laden but also value-laden. Stephen Toulmin develops a similar argument when he claims that a tenable version of objectivity 'requires us to make explicit, and to make allowances for, the interests and values that we ourselves bring to our research.' (Toulmin 2001: 96) However, to further develop a version of value-freedom that avoids the above quandaries is a task beyond the scope of this thesis.

3.3 Chapter summary

Like many other versions of objectivity, Weber's account mostly concerns the conduct of researchers. Objectivity-as-value-freedom is designed both to keep science free from politics and politics free from science. It functions as a double prohibition. If politics enter scientific

practice, science cannot clarify properly. If science enters political practice, it replaces free value-choices with false technical certainty. According to Weber, legitimate science may only give statements of logical and empirical facts. In questions of values, there are no facts. Science must therefore stay silent on these matters and cannot arbitrate or choose side in the eternal existential battle between ultimate values. Science does not guide us to a world view; it merely clarifies to the combatants what the stakes are.

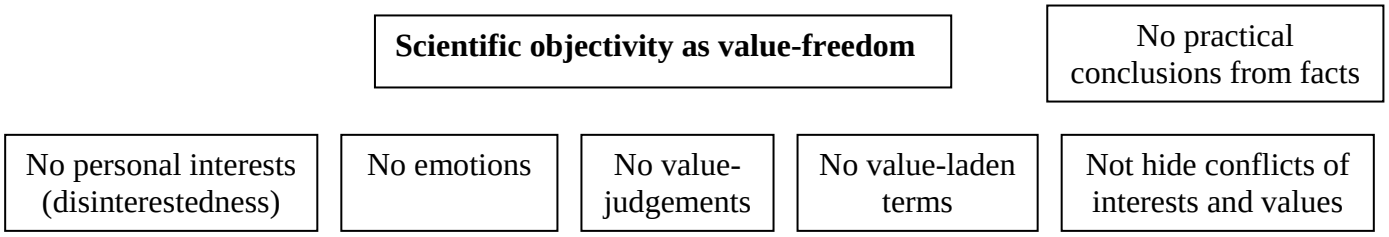
Weber said that the value of truth *motivates* science, and that other cultural values give *direction* to the investigations. Science is value-relevant and cultural values take part in shaping scientific problems, perspectives and concepts. They direct our perception towards certain fragments of reality and not others. Contemporary science studies show how scientific practice is guided by scientific values. As for results, to the extent that they are described in language, they are more or less value-laden if we are to believe several scholars within science studies and philosophy. From a contemporary perspective, the diagram from the beginning of the chapter would be modified in the following way. It still remains an issue of debate whether *cultural* values play any part in scientific practice.

Values in the scientific process: Contemporary version

Problems, perspectives, concepts and selection	Scientific practice	Results	Application of results
	Guided by		
Value-relevant	scientific values	Value-laden	Guided by values

Weber stands for a different version of objectivity than many before and after him. Scientific objectivity does not simply mean ‘finding the truth’, although that is what we ultimately aim at. Objectivity means practicing science in a value-free way manner and producing value-free scientific accounts, in order for science and politics to stay separate. To be objective is not to mix up facts with values or science with politics. It has very little to do with some of the chief concerns within the natural science versions of objectivity: transcending the individual perspective and preventing all intervention from the subject. Weber allows for many things which others prohibit: theoretical presuppositions, individual perspective, individual skill, imagination, interpretation, and theory-laden observations. His scientific objectivity is first and foremost about value-freedom. This applies to the investigation and the end product (knowledge) but not to questions, concepts, selection and problems. In all these, culture and values are present. In service of the calling of science, scientists must respect the logical gap between facts and values in order not to do politics. When we compare objectivity as value-freedom to the analytical model **[see the box ‘Conduct’ in appendix]**, we see that only three sub-values are kept: Disinterestedness (ban on personal interests), freedom from emotions and

value-freedom. The third is subdivided into further prohibitions. It is forbidden to A) Pass value-judgements and portray them as facts. B) Use value-laden terms (which contain judgements). C) Conceal conflicts of interests and values. D) Deduce practical conclusions from facts.



The following two chapters will show how plurality and diversity within science is connected also to plurality within self and society. In all three spheres irreconcilable perspectives co-exist, although not peacefully but in constant tension and struggle. Weber's view of science requires also specific views of ethics, the self and politics, in order to be a tenable option.

4. Self: The objective scientist and his suppressed side

How did Weber conceive of the researcher? What type of human subject is presupposed by his scientific objectivity? While bearing in mind that background assumptions about the self change over time, we look at both mental structure and personal traits. What is the mental order of the scientist's self?

A first point – and one that is rather easy to make – is that Weber's ideal scientist is a man. Weber consistently writes 'he'. In this he was precisely in tune with his time. Still in the 1950s, the leading sociologist of science Robert Merton did not consider the possibility that the scientist could be anything but a man. (Kjørup 1999: 113.) When trying to see the *specificity* of Weber's account, this point is therefore less significant, since male bias was generally the case. However, in chapter 5 when ethics, autonomy and the responsibility for the nation are discussed, gender will show itself to have some bearing on these matters.

The most striking similarity between Weber's objectivity and earlier ideals is that they all stress discipline, self-control and turning the self on itself. Some aspects of the subject interfere with rational science and therefore there is a need for proper conduct. The scientist must keep close check on his/her mental life, with some mental faculties negating and restraining others. Weber's objective scientist is less *mechanical* than was often the case in the natural sciences. In the 19th century there was a strong wish to make the researcher more

machine-like, or even having the scientist replaced altogether by self-registering instruments and calculating devices. (Daston & Galison 2007) Another way to eliminate subjectivity from the scientific process was to turn everything into standardised numbers, since numbers were seen to lack subjective qualities. (Porter 1994) Weber explicitly rejects these kinds of epistemological moves and the fears that motivate them. Science is not a matter of cold calculation. The factory, which was sometimes an explicit ideal for natural scientists, is dismissed as a model for science. There must be whole persons present for scientific work to be possible. Just like in art, inspiration and imagination are essential. (GAW 589-91, VOP 15-17) Daston & Galison tell us that objective science originally contrasted primarily against *art*. The virtues of the artist depended on being *as subjective as possible*, whereas the scientist should constrain subjectivity. Their traits of these two types were complementary and should not be confused. (Daston & Galison 2007: 246) To Weber's ideal science, several of the artist's defining traits were no longer threatening but necessary. A further contrast is that Weber stresses the need for interpretation and skill, things which were directly banned in the natural science ideals of objectivity. The scientist cannot be a calculating machine or a mechanical registration device, but must have empathy, imagination, judgement and creativity. These particular subjective aspects do not pose threats to Weber's ideal science. The subjectivity that he wants to ward off is the *evaluative* side of the self. The fear motivating Weber's epistemology is that of mixing facts with values, or science with politics. So what type of self can avoid these dangers? To answer this we must first understand how Weber generally conceived of the human subject.

4.1 The unity of the divided self

Weber tells us that there are three types of arguments. The first is questions of *cultural values*. They are directed towards our *emotions* (Gefühle) and our ability to feel enthusiasm (Begeisterung) for something. The second is questions of the *validity of ethical norms*, directed at our *conscience*. The third type is questions of the *validity of empirical truth*, which are directed towards our ability and need to order empirical reality through our *thinking*. (GAW 155, VOP 104)[16] It appears thus that we have three distinct areas, a triad similar but not identical to the three types of argumentation that Jürgen Habermas discusses. (Carleheden 1996) However, for Weber only two of these areas have validation criteria. Science and ethics can reach valid results, which for Weber mean *universal* validity. It is possible to reach conclusions about truth and ethical norms that are valid for all humans. Cultural values on the other hand are subjective and simply have to be *chosen*. Even though we make judgments in all areas, value-judgements cannot be valid. What Weber also tells us here is that different parts of the self deal with these three areas: Our emotions, our conscience and our rational thinking respectively. The mental faculty of judgement appears to be split in three parts. Rational judgements are performed by the intellect, value judgements are guided by the

[16] Weber also uses the term 'Verstand' to refer to this cognitive ordering, just like Kant. (GAW 157, VOP 106)

emotions and ethical judgements are performed by the conscience. Science and politics are associated with their respective institutions, university and state, whereas ethics seem to belong only on a personal level.

	Politics	**Ethics**	**Science**
Mental faculty:	Emotions	Conscience	Intellect
Questions of:	Cultural values	Ethical norms	Empirical truth
Valid judgements:	×	✓	✓

Weber says it is the scientist's duty always to make clear in a scientific text whether the arguments are directed to reason (and thus fall within science) or to the emotions (and thus fall within non-scientific value-judgements, i.e. politics). He primarily contrasts the *thinking researcher* against the *wilful human*. The scientist must always make clear in which role he speaks, so that scientific statements are not taken for value-judgements and vice versa. (GAW 157, VOP 106) The greatest sin a scientist can commit is to confound scientific (logical or empirical) concepts with evaluative concepts. To present one category as being the other violates the logical distinction between facts and values, and also the separation between the two distinct value-spheres of science and politics. It is the 'elementary duty of scientific self-control' to sharply distinguish between logical and evaluative categories. (GAW 200, VOP 148)[17] It is interesting to note that the language Weber uses here is highly morally loaded. It is not rationality that calls for this distinction, but *duty* and *self-control*. Self-restraint and discipline is of utmost importance to Weber's objectivity. To be objective is not to let the evaluating side of oneself take over. There is an inner conflict between reason and passion where self-control is required in order to maintain objectivity.

The division between the different aspects of the self must not go too far, since all are needed in a flourishing human being. If value-free rationality were to suppress emotions and non-formal reasoning too much, the result would be a soulless specialist with no feeling for what is important in human life. A value-free scientist should not be a person who values nothing, but a person who does not let evaluations into science. (GAW 157, VOP 106) There is an inherent danger in the process of rationalisation and specialisation. The person who *in his entire personality* is nothing but a specialist, is not a whole human being. If a culture would deteriorate to forgetting value-questions, such a society would indeed shape poor persons,

[17] 'elementare Pflicht der Wissenschaftlichen Selbstkontrolle' (GAW 200, VOP 148, my translation)

able only to see and discuss matters of technical and instrumental character. (PE 86)[18] It is precisely since values are so important that the principle of value-freedom must be upheld, in order not to illegitimately confuse them with other types of questions. If the scientist does not adhere to the principle, s/he risks reducing values to technical matters.

According to Weber's view of ethics, everyone must use their conscience to choose an ultimate value and follow it wholeheartedly. (Owen 1994) The choice of value-axiom is pre-rational, existential and subjective. Rationality cannot guide us, or prove what should be chosen, it can only help us by clarifying what is involved in the choice. Once a value-sphere has been chosen, one must accept the calling of this particular sphere. Every vocation has its own inherent laws. (GAW 494, MSS 5) Science too is a value-sphere. (Bruun 2007: 28) The scientist has made the value-choice of serving the truth. Along with the acceptance of the scientific calling, or vocation, comes a code of adhering to the truth and of keeping science and politics apart. The scientific calling means that one stays loyal to the cause (Sache) and does not propagate one's own interests or values.

The objective scientist strives hard to find out more about the study object, but not for the sake of curiosity. According to Daston, curiosity had gone from being a vice in medieval times to eventually becoming a virtue. In the 17th century, it was considered good to find out about ever more phenomena and novel objects. Curiosity was controlled but *fun* – almost indulgence – whereas it was later became more disciplined and part of self-controlled hard work, where attention was willfully and tirelessly turned towards the object of study. (Daston 1995: 17, 2007: ch. 4) The latter applies also to Weber's account. For him curiosity is subordinate to *duty*. One should inquire and find new knowledge as part of the calling to the cause of science. The scientist does not look for the new for the sake of enjoyment and curiosity, but in order to serve the cause which he follows.

4.2 Science as a passion for reason

Weber contrasts the scientist with the politician. For both, it is important to have *Leidenschaft*, i.e. fervour or passion. Both should be passionately devoted to the chosen cause (Sache). In the case of the politician this means fighting for a certain cause, and for the scientist it means untiringly seeking knowledge about a specialised area. Leidenschaft is not about giving in to passions, rather almost the contrary. It is to be passionate about not letting the passions in, being dedicated to the project and not succumbing to personal interests and values. The politician must combine Leidenschaft with a feeling of responsibility and a sense of proportions. (GPS 435, VOP 80) Passion in this context does not mean giving in to

[18] Much has been written on the dangers of letting instrumental rationality drive out value-rational considerations altogether, but that lies outside the aim of the present work. See e.g. discussions by Jürgen Habermas, Max Horkheimer and many others.

emotions, but following the chosen value-sphere with *Sachlichkeit*, only having the cause in mind.[19] 'Passion in the meaning of dispassion/dedication (Sachlichkeit): passionate dedication to a "cause", to the god or demon, which is one's lord'. (GPS 435, VOP 80, my translation)[20]

Weber also mentions Leidenschaft as a prerequisite for inspiration. The scientist needs strong Leidenschaft, hard work and self-control not to be affected by personal goals in his toil. (GAW 589, VOP 15-16) After having chosen science as a calling, the scientist does not take sides in the struggle between other values even if he should wish to, but practices self-restriction. Those who adhere to the scientific calling will carry out their duties dispassionately. Passion for the cause leads to self-distance and strict control of the emotions. We could say that Weber has a strong passion for non-emotional research.
practice

Weber states that the calling of science means that the struggle for knowledge is all; it is a self-absorbing enterprise where no space is left for the expression of personality or personal wishes. Science is practiced for its own sake – for the love of truth – and not as a means to something else. (GAW 599, VOP 25) Weber repeatedly stresses that to accept the calling is to become a *servant* to the cause. The scientist practices self-abnegation and should even *hope* that his own contribution be surpassed and made obsolete, so that the cause of science is furthered. (GAW 592, VOP 592) The person should remain humble and keep her personality in the background. To accept the calling is to agree to stand aside, to eliminate subjective sympathies and sacrifice oneself to science.

Both the scientist and the politician should devote all their time and energy not to their own advancement, but to serving the cause they have chosen. The calling/vocation (Beruf) requires not only dedication to the cause but also the art of self-limitation (Selbstbegrenzung), drawing borders for oneself. (GAW 494, MSS 6) The cause should be everything and the person only its humble servant, passionately striving for it. However, the ways of serving differ. The politician serves the cause by struggling to advance it. Politics is the struggle between those ultimate values, or 'gods' as Weber metaphorically calls them. It is everybody's duty to fight for the values they believe in. (GAW 601, VOP 27) The politician shows devotion for the cause she believes in by attempting to further it at the expense of other goals. Weber stresses in several places that there is no rational way of reconciling these disparate goals since they

[19] 'Sachlichkeit' is hard to translate into English in this context. An English-German dictionary (dict.leo.org) gives the main suggestions 'dispassion' or 'objectivity', which is both correct and may seem misleading. 'Sache' means 'thing' or 'cause'. For Weber, Sache denotes the goal or faith that one follows, and Sachlichkeit a dedication to this cause.
[20] 'Leidenschaft im Sinn von *Sachlichkeit* : leidenschaftliche Hingabe an eine "Sache", an den Gott oder Dämon, der ihr Gebieter ist.'

are different world-views, value-orientations towards the world (Weltanschauungen). (GAW 153, VOP 102) Ultimate value-standpoints are at bottom irreconcilable. They have to meet in battle. (GAW 507, 608, MSS 17, VOP 35) In questions of values, we will always have a situation of "polytheism". (GAW 507, 603, MSS 17, VOP 30)

In Weber's eyes, the scientist serves her chosen cause by ceaselessly trying to understand and seek knowledge about it. Everyone who wishes to be a scientist must value the goal of truth, but apart from that one chooses the area of study out of one's interests and values. These values are often given by culture, but we as individuals may choose between them. After she has chosen, the scientist pursues the cause and tries to investigate it to the best of her efforts. She should be truly passionate about it, although this does not mean letting those emotions affect the scientific work. Value-judgments stem from emotions, and they are to be restrained within the sphere of science. Passion is used only as motivation for dedication; working hard and ceaselessly serving the cause. The scientist is a person who has a passion for empirical truth generally and for the chosen area of study specifically. Science only clarifies the logic, consistency and consequences of value choices. It helps making clear which standpoints are consistent with certain values, and what would be the probable consequences of following them. Science says nothing of whether these values and goals are good or bad. Scientists serve their chosen specific cause (the truth about a certain area of study) by clarifying and understanding it better. It is the scientist's duty to create clarity and incite responsibility in others. (GAW 607, VOP 35)

Leidenschaft and Sachlichkeit are normally considered as opposites, but in Weber's account they are both necessary for objectivity. Since emotions provide the motivation for practicing science and rational thinking, this gives the seemingly paradoxical situation where the emotions motivate reason to control and delineate the emotions. Without emotions and values, science would not be possible, but for science to remain possible, values and emotions must not be present *in* science. Through this elegant solution, Weber stresses the importance of values and emotions for being a successful scientist and a whole human being. Emotions cannot be eradicated, yet they must remain outside of science. In this struggle between intellect and emotions, the conscience remains neutral. If responsibility is not assumed, the different mental faculties will mix with each other and transgress their proper boundaries. Human nature contains conscience, intellect and emotions, but we must civilise and restrain ourselves in order to produce science and achieve autonomy. Reason must subdue and control the emotions, drawing the boundaries which the latter must respect. Alvin Gouldner describes Weber as a minotaur; a cloven nature split between head and heart; reason and emotion. (Gouldner 1964) Although this may appear to be correct at first glance, it is not the whole truth. Weber's self is not cloven by nature, but by *willpower* and moral strife. Heinrich Rickert said after Weber's death:

> …[for Weber] there was nothing for it but to distinguish sharply between the theoretical man … and the practical man … not only conceptually, but in the *reality of his own person* ... Such dualism was both a moral and a theoretical necessity for him, and he carried it out in practice to an astonishingly high degree … [The audience felt] that they were listening to a man who was forcibly suppressing something within himself. (Rickert 1989:84-5, quoted in Bruun 2007:38)

Rickert touches upon several themes which have shown themselves interesting in our analysis: the distinction between two types of behavior; that this distinction was both moral *and* theoretical; that the theoretical aspect of the self needs to suppress the practical aspect. Within the person, an active part of the self strives hard to keep another part inactive. The will is used to control itself. The scientist must will that the mental faculty of the will be restrained by the intellect. The wilful, wishing, feeling human must wish to restrict itself so that the intellect may perform its task undisturbed. (see p. 30 above) When describing the spirit of objectivity in 19th century natural sciences, Daston & Galison talk about a 'will to willessness'. This means to "practice self-discipline, self-restraint, self-abnegation, self-annihilation and a multitude of other techniques of self-imposed selflessness." (Daston & Galison 2007:203) Paradoxically enough, the self wishes not to have any wishes, at least not on the inside of science. The main obstacle to proper knowledge is the intervention of the wrongful aspects of the self. This structure found in the natural sciences fits very well also with Weber's form of objectivity, despite the differences in *which* elements of the self to keep on the outside. Weber's Leidenschaft, and thereby his objectivity, requires a strong engagement of the self to avoid any illegitimate engagement. The self keeps (the prohibited aspects of) itself in check. (ibid.) For Weber as well as for previous advocates of objectivity, the self is both the *means* to knowledge and its greatest *threat*.

We have seen that in the human self as Weber conceives of it, two sides struggle with each other (whereas the third, the conscience, does not take sides): On the one hand we have the human who uses her will, who has emotions and desires, who follows values and wishes, all of which are subjective. On the other hand there is the thinker who uses her intellect to test arguments, construct concepts and organise reality into categories, with the help of logic. The will is constrained by the rational side of the self, which stands for self-control and abstinence, almost like impulse control. Weber sees this rational purification as characteristic of Western civilisation and modern science. The relation between the intellect and the passions is in some respects similar to one we find in another German-speaking intellectual of the time: Sigmund Freud. By 1908, Weber had read the major works by Freud. Both thinkers very much stress the importance of personal conviction, and also that a fundamental existential condition of humanity is that we orientate in and make sense of our world through ascribing meaning to it. (Strong 1987) Cornelius Castoriadis points out that Freud conceived

of psychical reality as consisting of a multiplicity. 'Now, the latter was seen by Freud not as *a* "subject" but as a *plurality* of subjects. He spoke about a multiplicity of "psychical persons", "intrapsychic" conflicts between opposing "instances"'. (Castoriadis 1997: 141) For Freud, passions are something which must always be constrained in order for civilisation to be possible. There is a clear hierarchy within the self, where reason must stay the undisputed ruler. Passions should neither be unleashed nor suppressed entirely, since that would result in a pathological state. (Freud 2005)

Before the idea of an internally differentiated subject having conflicts between parts of the self, the self could not be posed as a threat to knowledge, and scientific objectivity (i.e. negating parts of the subject) was unnecessary and unthinkable as a scientific virtue. (Daston & Galison 2007: ch. 4) Freud was not the origin of the notion of an internal battle between mental faculties, although he became the most famous exponent of such ideas. Some similarities between them are striking. In Weber we also find a multiplicity within the self, and it is important that the subordination of emotions under reason is not constant. These warring sides both have a field of their own where they properly belong. In science, the self constrains those aspects of itself which are improper. In politics, they are let loose. In fact, it is even one's *duty* to follow the passions in politics. Everyone *should* speak their own mind and fight for the values they believe in; passionately serving the cause they have chosen. In modernity, the threat has arisen of the soulless specialist who has no values and merely operates according to standards of instrumental rationality. Just as for Freud, if the rational aspect of the self completely suppresses the emotional one, the result will be pathological. Remember that both *Leidenschaft* (passion, fervour) and the existential value-choice are necessary presuppositions for science. For Weber, the passions are a driving force. They motivate all life projects, *even that of science*. Emotions are a prerequisite for rational science, not an antithesis to it. This was a rare standpoint at the time. In this respect, Weber's account squares nicely with the findings of Damasio referred to in chapter 2, showing how emotions motivate rational thinking. (Damasio 1999) The scientist must have passion and values in order to do his job, but he must not confound these with science. The thinking intellect should have a firm grip of emotions and motives. Passions cannot be eradicated, yet must remain under strict control while inside the sphere of science. The self must remain whole but diversified: Plurality within the self, just as there is plurality within science.

Background assumptions about the objects of study and about the normal order of things affect the way science is practiced. (Sismondo 1996, Longino 1990) It is very hard to separate culture from science when it comes to these more or less subconscious beliefs. Every scientist starts with a view of reality handed to her by the culture where she was socialised, and which directs scientific enterprises. On the reverse, several notions that were first only scientific have now become part of our culture and everyday way of seeing the world. Think e.g. of

Newtonian space, the Freudian unconscious or, to take an older example, the discovery that the heart is a pump and not an oven. In Weber's case, early 20th century culture harboured different background assumptions about the human self, than in the mid-19th century. This shift in background assumptions led Weber to advocate a very different objectivity than the types suggested earlier.

4.3 The Puritan connection

In *The Protestant Ethic*, Weber extensively analyses the Lutheran concept of *Beruf*. In contemporary German it has the meaning of 'profession' or 'vocation', but it originally had the meaning of 'calling' (from God). Luther generalised the calling to apply not only to clerical groups but to everyone. Every person was called unto to do her duty (Pflicht) and serve God. This was done through carrying out the tasks associated with the position in society she occupied. The duty of serving God became transformed into worldly hard work. That is why the meaning of the term eventually changed. (PE). Also in Weber's own thinking, the notion of calling plays a major role. Harvey Goldman points out that Weber's secularised version of the calling is heavily influenced by Calvinist Puritanism, where it has a much more ascetic nature. It places stern moral demands on the person to assume responsibility, shaping the self into a dutiful character with a project. Weber saw a need to 'return to the "individualism" of life in the calling as a response to the collapse of a shared, or "collective" sense of meaning in life. (Goldman 1988: 49) The calling is for Weber connected to his views on value-pluralism, individual value-choice and self-formation.

Since Weber sees ethics as formal, he does not believe that it in itself can tell us how to act. That depends on the nature of our chosen calling. The artist, the scientist and the politician have all accepted different callings and are thus compelled to act differently. Every calling brings an ethical duty to be fulfilled well. Weber uses the word Beruf in the double sense that also the English 'vocation' still has. Even though he takes the notion of the calling from Luther, there is one major difference between them. For Luther, the calling came from God. Every person was called upon to fulfil her duty to God. Weber transforms the concept so that its ethical form – the ethos and duty of the calling – remains, but it is no longer given from outside. Instead we *choose* our own callings, using our conscience. The duty to work hard and serve remains, but is no longer directed towards God but to the ultimate value we have chosen. This is an essential part of our autonomy; forming ourselves into unique individuals. To choose the calling is to choose what aim and purpose life should have. This is the fundamental value-choice in each person's life, which science cannot perform but only help to clarify. The term 'Beruf' has changed its meaning from Luther to Weber, since we are not *called* to our vocations – to the cause we dutifully serve – but *choose* them ourselves. We choose the projects which give meaning to our lives. This fact is highly significant for understanding the logic of Weber's objectivity.

Weber explicitly describes science as a calling, using a religiously loaded vocabulary. His explication of the virtue of objectivity may be seen in the light of religious development, especially Protestant Puritanism. There are strong affinities between the objective scientist and the puritan devotee. Both are driven by a calling, a commitment to a higher cause that greatly surpasses them. Both should subject themselves to a harsh regime of self-discipline, practicing abstinence and keeping close check on their inner life. Both should stay humble before this cause and not fall prey to the hubris of elevating their own person. The scientist chooses her cause and serves it ceaselessly, just as the religious devotee chooses her denomination. Weber repeatedly calls different ultimate values 'gods', which are to be served. One should live one's life consistently and in accordance with the faith that one follows, regardless of whether this is a religious faith or not. The sphere of the *sacred* (whether it is science or religion) should be kept pure and not be contaminated by personal interests, commercial matters or political struggles. We see here similar views concerning the ideal self and its opposite. The cognitive conduct of both Weber's objective scientist and puritan devotees is characterised by the ascetic virtue of *abstinence*. The first group abstains from value-judgments and the second from pleasure. What value-judgments and pleasure have in common is that they both derive from the *passions*, and can be understood as self-indulgence. In both cases, passion should be directed only towards the object of devotion, the God that the faithful ones serve. Uncontrolled passion is a cardinal sin.

Virtuous self	Vicious self
Dedicated to the calling	Ruled by the passions
Self-abnegating	Self-indulgent
Strict control of inner mental life	Falling prey to whims and fancies
Hard working	Lazy
Holds back personality	Advances own person

Weber was fascinated by religion, even though he never considered himself religious. (Ringer 2004) Paul Honigsheim, who knew Weber in person, witness of his admiration and deep respect for religious life. (Honigsheim 1968) Puritan asceticism occupied a prominent position in Weber's writings, not least in his most famous work, *The Protestant Ethic and the Spirit of Capitalism*. Weber understands the duty of the ethical life in terms borrowed from Luther and other branches of Protestantism. Doris Bosch shows that also his ideal of objectivity was strongly influenced by Puritanism. She argues that Weber's position should be understood as *scientific asceticism*, directly influenced by Puritan asceticism. The two have similar forms but different aims. (Bosch 1962) In Weber's case, religious virtues and ideals of personhood are transformed into their scientific counterparts.

4.4 Chapter summary

In Weber's time, background assumptions about the self had changed since the heydays of objectivity around 1850. That is one major reason why his objectivity looks different from earlier naturalistic versions. Though it also has the form of negating aspects of the subject, it answers to different threats. The aim is no longer knowledge untainted by *every* aspect of the self, but knowledge untainted by the evaluative aspect. As Weber sees it, there is a *plurality* within the self. The self is divided into intellect, conscience and emotions. Between intellect and emotions there is an *irreconcilable tension*, a struggle that can never be resolved. All three must be present in the flourishing human being, yet the aspect of the self which is emotional, evaluative and political must be severely restrained within science. Objectivity requires a passion for the truth. The objective scientist has a *passion* for the calling and the area of study, but acts with self-distance and controls emotions. There must be harsh discipline: Self-abnegation and not indulgence. Weber's view of proper scientific conduct is infused with Puritan values. When attempting to understand why Weber's conceived of objectivity the way he did, one important part of the puzzle is the Puritan view of the self and the calling. Weber wished to ban cultural values from scientific practice. Yet it seems cultural values take part in shaping the scientific values that guide scientific practice. Weber's model for the scientific self partly derives from the outside of science, from the cultural current of Puritanism. However, when Puritan asceticism is adopted into science, it is transformed in the process. Weber's scientific self is not an exact copy of the Puritan ascetic, but a modified version adapted to the inside of science. The scientific life presents other demands and restraints than the religious life. When cultural values become scientific values, they are no longer the same.

As will soon become clear, Weber combines the ethical vision of the calling, which includes the duty to serve in a self-abnegating manner, with the ethical vision of *Bildung* as self-formation and autonomy. That is why we choose our own callings and then serve them. This is part of the ethical task of self-formation and creating a unique individuality. The next chapter will look closer at the roles of ethics and politics in Weber's thinking, and examine how these fit together with Weber's views on science and the self.

5. Society: Objectivity and social order

After having examined Weber's views of science and the self, we now turn to society. To understand what it means to be an objective researcher, we need to examine also how Weber viewed the relationship between science and politics. In this chapter we look closer at the political and existential concerns related to Weber's view of objectivity. This will tell us what type of fears that drive the methodology. What does the Weberian anxiety consist of?

5.1 The agonism of politics

The distinction between ethics and politics

Ethics precedes politics. Ethical questions are not questions of cultural values but are apolitical. Weber explicitly demarcates ethics from cultural values (and thus from politics). The two value-spheres are not identical. Unlike value-judgements, ethical propositions may be *valid.* An example of a valid ethical norm would be the duty to serve the chosen calling. The validity of ethics does not bear on 'social-political problems', and so does not recommend specific ends or actions. On its own, ethics cannot tell us how to act. (GAW 504, MSS 15) Ethical questions have valid answers, but they do not unambiguously guide us in real-life situations. Only in matters of pure reflection, untainted by reality, may we come up with unequivocal ethical answers that attain validity. According to Weber, ethics in itself cannot tell us how to live. Even within ethics there is a *tension* between the ethics of conviction (Gesinnungsethik, acting with regard to a value) and the ethics of responsibility (Verantwortungsethik, acting with regard to the consequences). Although these often stand in opposition and have incompatible groundings, both of them should be present in the ethical life. These two types of ethics are *complementary*. Every person has to weigh values and consequences against each other, and there can be no rule to tell us how this should be done. (GPS 448-49, VOP 93-94) This means that there is an agonistic plurality (see below) also within ethics, although the plurality contains only two elements. Furthermore, Weber says that ethics and cultural values relate to each other as form to content. Ethical norms have a *formal* character and need to be "filled" with the specific *content* of cultural values in order to guide action. (GAW 148, VOP 97)[21] It follows from ethics that everybody has a duty to serve their calling, regardless of which cause they have chosen. Weber's idea of ethics is clearly influenced by Immanuel Kant: Ethics has a formal character, and so stays neutral with respect to substantial values. It prescribes what *form* duty takes, but not its content. Ethical norms are valid for all, irrespective of culture. Ethics does not contain value-judgements.

Ethics (conscience) prescribes that every individual chooses an ultimate value to believe in. Weber uses the following more or less synonymous terms to designate that which is chosen: Ultimate value; value-axiom; "god"; cause; calling; faith. He states that every person has to decide what she considers to be the god (or value-axiom) worth following, and that may well be the "devil" for another. (GAW 604, VOP 31) Since reason cannot dictate which ultimate value or cause to serve, being called by them is a matter of *faith*. Different world-views or value-orientations (Weltanschauungen) are caught in an eternal political struggle, and we have to make *choice* between them. (GAW 608, GPS 436, VOP 35, 82-83)

[21] If this is hard to understand, think of the relation between them as similar to that between hardware and software. Computer hardware on its own has no direction, no task, no meaning, yet it is the inescapable form which all software must conform to. The program uses the hardware to outline specific actions.

The irreconcilable struggle between values

The different callings that we choose in life cannot be reconciled or combined in any simple way, since they operate according to different inherent logics. (GAW 494, MSS 5) Weber says: 'Life is an unceasing struggle of these gods with one another. Or speaking directly, the ultimately possible attitudes toward life are irreconcilable, and hence their struggle can never be brought to a final conclusion. Thus it is necessary to make a decisive choice.' (MSS 31, GAW 608)

Several commentators, among them David Owen, claim that Weber adopted this view of existential struggle from Friedrich Nietzsche. Nietzsche believed that incompatible views of the world were locked in a battle that could not be resolved by reason. (Owen 1994) However, Bruun argues that only the type of *problems* that occupied Weber were Nietzschean, but not the *answers* that he gave. (Bruun 2007: 41) Weber was slightly more optimistic than Nietzsche. Science can provide clarity to facilitate the making of life choices. It clarifies not only matters of fact, but also relations of values, making clearer the ultimate meaning inherent in actions. It can tell us what values and meanings that different actions and utterances harbour. Science helps others make their own choices, but cannot itself say which choices are valuable. (GAW 607, VOP 34) Weber's view of politics could be described as *agonism*. It stresses *pluralism* and *conflict* or *tension*, and sees both these elements as ineradicable and positive. The world would be a poorer place without this plurality.

Even if there is a plurality of "gods", there are also *false* gods. (Götzen) Weber rejects some values which he means are simply superficial and poorly reasoned. (GAW 591, VOP 17) They do not live up to the standards of genuine callings and cannot function as value-axioms. Mere opinions or unreflected judgements are not worth as much. Only those ultimate values which truly express a person's active choice can legitimately take part in the struggle of values. The plurality of values seems to apply only to those values which are pondered upon and freely chosen. Ringer says that 'Weber admired autonomous individuals who act upon carefully considered principles.' (Ringer 2004: 57) Values that people hold without thinking or merely because someone told them to, are not worthy of the same respect. Weber says: 'The fruit of the tree of knowledge consists in the insight that every single important activity and ultimately life as a whole, if it is not to be permitted to run on as an event in nature but is instead to be consciously guided, is a series of ultimate decisions through which the soul … *chooses* its own fate, i.e., the meaning of its activity and existence.' (MSS 18; GAW 507-8, emphasis in German original)

The aim of science (and teaching) is to clarify to others what exactly their ideals actually imply: consequences, consistencies, contradictions. Science shall thereby make it easier for people to make their own value-judgments as political citizens. Weber is clear that this

applies particularly to teachers. By prescribing political opinions to students, their autonomy is denied and they are encouraged to become spineless followers. (GAW 489-91, MSS 1-4)

Bildung and values versus utility and self-interest

Political questions are for Weber always questions of power. (Lassman 2000) The means of politics is violence. (GPS 397, VOP 40). This is perhaps not too surprising, since Weber leaves little room for reason and arguments within politics. However, it is important to note that politics is not primarily the struggle for personal *interests*, but for personal *values*. Those who live up to the standards of ethics do not fight for their own benefit but for the faith of their choice. Politics is a battle not between self-interests, but between 'ultimate values'. Weber sometimes talks of conflicting interests, but often reverts to the language of values when he discusses politics. Even though the arena of politics involves violence and emotions, this battle is not fought between egoistic utility maximizers who all try to further their own self-interest, but between the followers of different gods. The aim of life is not happiness or utility, but to live in accordance with a value that has been freely and actively chosen. In science as well as in politics we can clearly see Weber's vision of *autonomy*. This goal of autonomy is seen by Weber as a (valid) ethical norm and not as a cultural value, thus standing outside of political debate.

At the time when Weber lived, German *Kultur* was generally set in opposition to British *Civilisation*. The latter was seen as egoistic, individualistic and aimed only at utility. It was devoid of the cultivation, genuine values and unique cultural ideals that the German nation stood for. (Boglind, Eliaeson & Månson 1993: 113, Eliaeson 2000: 138) 'Weber shared much of this, notably the sense of a distinctive national cultural mission that required a strong state.' (Eliaeson 2000: 138) According to Fritz Ringer, Weber was deeply influenced by the German tradition of *Bildung*. To achieve Bildung was to cultivate oneself, growing in both moral and cultural sensibility and aiming for 'the development of an incomparable individual'. Every person should find her own way, making herself unique. Along with this came a positive valuation of both individual and cultural diversity. (Ringer 1997: 9) The German tradition of Bildung is explicitly against the notion of utility, which is always a means for something else. Humans should instead strive for Bildung, which is an end in itself. (Kjørup 1999: 66-7) The soulless specialist whom Weber warns against in the Protestant Ethic (PE 86) may be described as having lost all values except that of utility. Some of the meanings of Bildung include education, learning, edification, self-determination, and self-formation. These ideals are clearly present in Weber's thinking. It was of great importance to him that each person should be allowed to choose her own destiny. (GAW 507-8, MSS 18) To make this value-choice was at once to form and to express one's unique character. The positive valuation of *autonomy* as Bildung informed also his views on science, the university and the German nation, as will become clear below.

Ethics as the formal basis of science and politics

In the sphere of culture and politics, values and self-formation are played out, as opposed to the sphere of science. To say what is desirable, good or valuable; to recommend action; to give normative or practical evaluations - these all fall outside the realm of science in Weber's eyes. Politics takes a stand on what ends are worth pursuing. That is what science must not do. Science may only clarify matters and give advice on means, not say what goals are worth striving for. Every person must herself make the value-choice of what the *telos* of her life is. Weber is very much concerned that the boundary between facts and values should not be transgressed. The distinction is held up, not just as a neutral piece of information, but as something which any rational person should stick to in practice. It is a prerequisite for proper knowledge. Political struggles should not be let into science, nor should science portray itself as capable of solving value-conflicts or proving what is right. What is most important is that value-judgements are not presented as scientific statements.

Weber recommends scientific action and prescribes what should be done or not. In other words, he first states a logical fact and then draws a normative conclusion about action. He moves from stating an *is* to recommending an *ought*; precisely what value-freedom forbids. On first look, it would then appear as if Weber himself has violated the principle which he argues to uphold. However, this is not necessarily the case. The principle of value-free science is a *methodological* principle, and not itself a piece of science. Methodology normally does not apply to itself. Weber only prescribes *scientific* action. He outlines what follows for those who have chosen the value-sphere of science. As mentioned above, there is no rational justification for science itself. Science is a calling where knowledge is sought for its own sake. It serves no other purpose than itself. If knowledge seeking was motivated by another value than truth, science would only be a means to another end. (GAW 592, 599, VOP 19, 25) A positive evaluation of science rests upon a previous value-choice: To value truth. Scientists have chosen to serve the cause (or "god") of empirical science. To accept the calling of science entails accepting the principle of value-freedom. It is part of the package of seeking truth in a rational manner. Recommending it in action is thus part of the formal preconditions which precede any scientific investigation.

Logical fact 1: Facts and values are 'logically heterogeneous'. Logical fact 2: It is logically invalid to deduce practical conclusions from facts. Practical conclusion: Scientists must respect this logical gap in their practice

It is here important to remember the role of *ethics* in Weber's cosmology. Ethics is purely formal and prescribe that everyone does their duty in serving their ultimate values, no matter what the substance of these are. Weber is well aware that it is valuational to argue that science

and politics should not be mixed. It is a value-choice to decide to adhere to the principle of value-freedom and thus not mixing up facts and values or science and politics, but it is a value-choice which precedes any scientific activity. It comes as part of the package of empirical science. Those who choose the value-sphere of empirical science must follow its inherent logic. Serving the cause of science includes respecting the ideal of value-freedom. Science is in itself evaluative, but only insofar as it values truth and value-freedom. Science cannot stay neutral towards itself. No activity can be performed well unless it is valued by the persons practicing it. Weber sees value-freedom (and the previous value-choice that it entails) as a prerequisite for performing good science. The *substantial* value-choice is to accept the scientific calling. Once that choice has been made, the *formal* (ethical) duty in this case prescribes that the scientist behaves in a value-free manner. In Weber's solution, values do not play a part *in* scientific activity, only as a prerequisite. The idea of duty as formal is essential in establishing this.

5.2 The politics of objectivity

The value-ladenness of value-freedom

When Weber was still alive, the state was dictating internal university affairs, while at the same time university lecturers spoke out on politics, recommending policy for the state. The fact that university lecturers were outspoken on politics was seen as a reason for the state to decide who should be allowed to hold university positions. Socialists and anarchists were banned from the university. In 1917, Weber publishes the essay *The meaning of 'value-freedom' in the sciences of sociology and economics*, where he further elaborates his ideas on objectivity as value-freedom, first put forth in the essay from 1904. Whereas the first paper focused more on epistemology, this one emphasises also the institutional situation: the role of the teacher; the relation between state and university; the role of science in society. Weber advances his position on Wertfreiheit in a time when the relation between the state and the university was hotly debated. How much freedom should be given to the universities? What is the relation between science and politics? Weber had a strong engagement in the matter, held public speeches, lectures and wrote many articles in the newspapers. (Josephson 2005:193) Do science and politics belong together? Weber fought hard both within the academy and on the political arena to make it very clear that they do not. He wished to safeguard the *autonomy* of the universities. The state should not interfere in academic business, nor should teachers and researchers utter opinions about politics. The two spheres should be separated. The state clearly demarcated from the universities, and politics from science. He draws a sharp line between the inside and outside of science.

Weber says only a few people can become scientists, but every citizen of the state has a duty to partake in politics. This means that everyone acts within the sphere of politics, fighting for their own standpoint, but only a small group acts within the sphere of science. To become a

scientist is hard and requires training, experience and devotion, not to mention talent and intelligence. Within the university, the standards of politics and state should not rule. There we follow reason, evidence and good arguments. University matters should not be decided from the outside by the state or democracy, but are matters for an aristocracy of mind/spirit. (Geistesaristokratische Angelegenheit). (GAW 587, VOP 14) That is why even political enemies of the (conservative) state, such as socialists, should be allowed to hold university positions. (GAW 496, MSS 7) In Weber's eyes, political motives contain cultural values and are therefore illegitimate within science. Since science cannot be a neutral arbiter choosing between values, politics must be kept outside of science, and vice versa. However, several commentators agree that there are political motives for the very postulate of value-freedom, since the separation between state and university (entailed by the principle of value-freedom) is so clearly political. It seems clear that the motives for Weber's version of objectivity do not only concern proper knowledge, but also morals and politics.

Since the postulate of value-freedom is motivated by practical concerns – political and moral issues – Willhelm Hennis argues that it is therefore not methodological at all. Against what he calls the "orthodox" view that value-freedom has to do with scientific methodology, he argues that value-freedom should be understood as a 'practical maxim for keeping a clear head, for ensuring the impartiality of the scientist'. (Hennis 1994: 115) It is not about science but values, clearly situated in contemporary German culture and society. There is a strong *ethos* in the writings. The texts on objectivity and value-freedom, which allegedly deal with methodological problems, actually deal with 'questions such as intellectual accountability, clarity, and awareness of the responsibility of the acting individual.' (Hennis 1994: 118) For Hennis, these are not proper methodological questions and to believe so is a great misunderstanding. According to Bruun, Hennis is almost alone in holding this view among scholars studying Weber. '[W]ithout the principle of value freedom and the idea of a value-free science, there would be little left of Weber's methodology.' (Bruun 2007: 11) Furthermore, *all* methodological principles can best be understood as normative, as values, and that does not make them less rational. If all methodologies are practical maxims – virtues which guide action – Hennis's distinction between evaluative ethos-infused texts and rational methodology collapses. However, we may still draw on the point he makes: that political and moral issues are massively entangled in Weber's objectivity and value-freedom.

According to Peter Josephson, Weber has three main political motives for value-freedom in science:

- To abolish the ideologically motivated discrimination that forbids 'enemies of the state' to hold university positions.
- To keep the internal unity of the university and not let it fragmentise into warring factions driven by different ideologies. If that happens it cannot fulfil one of its most

important functions at the time: Clarify issues of values in order to educate and strengthen the confused and fragmented German nation.
- Protect students from ideological indoctrination. They should develop autonomy in order to choose for themselves. (Josephson 2005:144-46)

We see here how Weber's concern for Bildung and autonomy meets his nationalism, in motivating value-freedom. In order for the state to stay strong it must not control the universities, since that hinders clarification and the capacity for self-formation. The next two sections show what implications the politics of objectivity-as-value-freedom has on the institutional and the personal levels.

Institutional level: The boundary politics of science

It is a fairly common idea in dialectical (Hegel-inspired) thinking that things are partly defined by *not* being something. Many entities are defined in opposition to what one could call their constitutive other. What makes something into what it is, are not only those things which are present but also those that are absent; not only the inside in itself but also the outside. We find this idea among such diverse thinkers as Roy Bhaskar, Theodor Adorno, Jacques Derrida and Jean-Paul Sartre. As an illustration, it is essential to the identity of any nation that there is an outside: those that do not belong to the nation. If no one was excluded from the inside, there would be no inside. (Hylland Erikssen 2002) The constitutive other of objectivity is subjectivity. As we have seen, with different outsides to objectivity (different aspects of the subject negated) we get different types of objectivity. The same is true for science in general. What science is depends on what it is defined in opposition to. For Weber, the constitutive other of science is politics. This does not mean that science and politics do not have anything to do with each other; quite the contrary. Exactly because they have so *much* to do with each other, it is essential to both activities that they remain separate. The absence of politics within science is an important part of what defines science as science. Of course many other things are also absent, but they are not *significant absences* to its identity. Politics on the other hand is a significant absence, helping define what science is. It is a constitutive absence.

Europe in the 17th century saw an increasing differentiation between social spheres. The areas we today conceive of as science, politics and religion were previously much more intermeshed. In the 18th century, the most significant absence for science was *religion.* Science gained its identity primarily by being contrasted against religion. (Gaukroger 2006) Nearly two centuries later, religion had long since been separated from science and no longer posed a threat to its integrity and identity. In relation to each other they both had full integrity and no one "confused" them. No one preached in the lecture halls and church officials no longer told universities what to do. Scientists had no business in churches just as priests had no business in universities. But the main *political* institution – the state – was meddling in

university business. And on the reverse, scholars offered their opinions about the field of politics, recommending goals and actions and prescribing policy.

Against this background, we may understand Weber's efforts as *continuing the functional differentiation and specialisation of social spheres* that is often seen as one of the defining characteristics of modernity. Weber's move is one of increasing the *integrity* of the scientific sphere and severing some of the connections to the sphere of politics. They have a strict division of labour between them. Science was to belong solely within the university, which politics was to be excluded from. The *means* to demarcating science from politics is the methodological principle of Wertfreiheit. In order to make science free from political prescriptions, Weber must prescribe a certain political order.

There are several questions which any political community must answer. Who is allowed to speak? What is a political act (as opposed to e.g. criminal, religious or scientific acts)? What is a legitimate political question? What is the means of politics? The answers to these questions are simultaneously *formal* preconditions of politics and *substantial* political issues possible to contest and debate. In Weber's case, questions of expertise, i.e. logic and facts, fall outside of the political realm. They belong within the sphere of science. Weber hides his political ideals of institutional differentiation in plain sight, by framing them as the formal preconditions for all of politics. The question of how to draw the line between science and politics is defined as a non-political question. Sheila Jasanoff, writing about the different ways that science has been demarcated from politics, concludes: 'Since these boundary-defining terms affect the allocation of power, their meaning cannot be established independently of the political process.' (Jasanoff 1987: 226) Through boundary work, Weber attempts to redraw the scientific-political-cultural map, simultaneously separating facts from values, science from politics and universities from the state. Drawing the boundaries for politics and other elements of society, including ethics, is itself political. Marking the boundaries of politics is a highly political activity. Stating what is politically legitimate, or what belongs within the realm of politics, are political statements. An answer to the question 'What is the political?' can not be given outside of all political struggles. This implies that regardless of whether *scientific practice* is political and value-laden, at least the boundary-making aspect of *methodology* is.

Weber can be seen as doing what Bruno Latour calls *purification*. To purify and separate two areas from each other requires conceptual work, changing meanings, as well as changes in practices and concrete connections. (Latour 1993) As a result we get two distinct areas: Science and politics. They appear to be ontologically different, functioning according to different principles and logics. Once Weber is finished there seems to be no values or questions of power inside of science, just as there is no rationality or reasonable arguments

within politics. Through the boundary work of his methodological writings and political actions, Weber aimed to recast the form of society and establish a new social order. This would not only have separated the institutions of state and university, also had deep cosmological implications, differentiating fields of reality from each other. Even though he failed to accomplish this in his time, his ideas later bore fruit and has today become commonplace.

Personal level: Agonistic pluralism and aristocratic autonomy

David Owen argues that the struggle for autonomy is of essential importance to Weber, and that it motivates most of his empirical investigations. They should be understood as attempts at furthering autonomy, by increasing the clarity and self-understanding central to choosing our own destinies. Since human is a historical and cultural being, the cultural sciences can provide better self-understanding. *The Protestant Ethic* is a prime example of this. A better understanding of how we came to be the ones we are, as well as of the significance, value-relations and probable consequences of our practices, will help furthering our autonomy. (Owen 1994) For this clarification of value-relations and the probable consequences of values-standpoints to be possible, the researcher needs to uphold the principle of value-freedom. Value-freedom is thus essential for realising autonomy, the capacity to choose one's own values and create one's own destiny. It seems Weber provides a formalistic account of the good life, which stays neutral with respect to the substantial content. He remains a value-pluralist, since he clearly distinguishes ethics from cultural values. Clarity and self-understanding (for which value-freedom is a prerequisite) is needed in order for them to autonomously choose their own values. This is part of the formal character of ethics. Since for Weber, the formal duty of choice concerns ethics and not cultural values, he remains value-neutral (on his own terms). All this shows that Weber's view of scientific objectivity is intrinsically linked to his view of the good life. What we have here is a case of a scientific value (inside of science) being motivated by and linked to a cultural value (outside of science).

Weber's own political position is not all too easy to pin down. Fritz Ringer describes him as a value-pluralist. (Ringer 2004: 5) He certainly was not a conservative, even though he had strong nationalist values. He expressed at least partial sympathy with social democracy. (Proctor 1991:138, 121) Boglind et al describes his position as 'national liberalism', arguing that the nationalist struggle to unify and foster the weak and fragmented German state was his main political priority. (Boglind, Eliaeson & Månson 1993: 121, 128, 130) Several interpreters see him as a liberal due to his outspoken pluralism, although he does not share the utilitarian view of the self that is most often associated with liberalism. He also stressed the element of *conflict* much more than liberal thinkers normally do, focussing instead on tolerance. Weber's pluralism could be described as *agonistic*, stressing the enduring character

of value-struggles, and the positive effect this might have. He does not believe that the tension between different political views could ever be resolved, or that it should be. Without a plurality of competing values the world would be a poorer place. Sven Eliaeson claims that he was not dedicated to liberalism as a set of universal principles. He also dismissed the liberalism of John Stuart Mill as resting upon metaphysical views he did not share. His views were far more aristocratic.

> He was a liberal in the sense of being deeply concerned about the individual as an autonomous cultural being, a value that was not shared by contemporary socialism. But he did not defend this as a universal principle, much less design a state that made the protection of individual autonomy into a general goal for the population as a whole. Indeed he did not think that this was feasible for ordinary people, governed by the necessity of making a living, though he did attempt to preserve the possibility of autonomous action and autonomous life for the few how could work out the material conditions for autonomy. This was an aristocratic notion of autonomy rather than a principled universalistic one. (Eliaeson 2000: 137)

Who had the means for forming themselves, developing unique personalities and choosing their own destinies, in the way that Weber conceived of? It is no secret that the tradition of *Bildung* that so influenced Weber's thinking is a bourgeois tradition, harboured by the cultivated upper middle class. The forming of selves is not a politically innocent matter. Both science and Bildung were male areas. Beverley Skeggs writes that in the 19th and 20th centuries, self-control and autonomy were mainly *masculine* ideals, as well as bourgeois ones.

> The individualism which is assumed in a great deal of theorizing on subjectivity is the product of, and in the interests of, privileged groups in very specific historical and national circumstances. The project of the self is a Western bourgeois project. (Skeggs 1997: 163)

If objectivity is primarily motivated by safeguarding the possibility of autonomy, and this autonomy is only for the wealthy few, this seems to suggest that Weber's methodological ideal of objectivity-as-value-freedom in fact was meant to serve the interests of the cultivated middle class. However, it could do this only by securing that science was rational, objective and pure from politics. Science serves this particular political interest by being free from political interests.

5.3 Chapter summary

Ideals of the self and ideals of society are often connected. Ever since Plato's *Republic* it has been a common thought that personal virtues are needed in order for the state to be virtuous. This idea is strong in the Christian tradition. In Weber's view of science, the virtuous scientist makes possible a strong and unified state that also lets every citizen choose its own goal.

Objectivity as value-freedom is meant to guarantee autonomy in multiple ways: Autonomy for the activity of *science* vis-à-vis the activity of politics, autonomy for the *universities* as social institutions free from state involvement, for the *nation* as a whole and finally the facilitation of *individual* autonomy for people choosing their values and destinies. Autonomy is thus played out in three areas – science (level of practice), society (institutional level) and the self (individual level). Autonomy should here not be understood in the reductive sense of independence, but rather as the more encompassing notion of *self-determination*: To consciously and actively form oneself, in the spirit of German *Bildung*. Science is needed to provide Bildung to the nation and to society; clarification in order to allow for self-formation. This cannot be achieved unless scientific objectivity is respected.

The Weberian anxiety does not only motivate *why* the researcher should be objective, but also *how*. Weber's explication of objectivity is part of his attempt to demarcate science from politics. If Weber's objectivity is interpreted too narrowly, one sees only a part of the work that this concept performs. It is *through* the virtue of objectivity that Weber's existential aims are secured. It aims not only at guaranteeing good science, but also at safeguarding the autonomy of both persons and universities, plus fostering a strong nation. Weber is doing boundary politics, defining the form of the modern scientifically informed state. A specific type of subject is needed, but also a specific type of institution. Weber's advocacy of objectivity as value-freedom simultaneously articulates ideals of good scientific practice, the researching subject, the institution of science and of the institution of politics. Objectivity defines not only the inside of science: what good science is and how the researcher should behave. It is connected to a whole cosmological order, including normative ideals. Weber's personal political and moral goals are present in shaping his methodology.

6. Conclusion: The cosmology of Weber's objectivity

Hopefully, by now this study has illustrated the relevance of sociology to issues of epistemology. We can now see what the *Weberian anxiety* – the fear motivating objectivity – concerns. Weber fears confusion and mixture; logical, institutional and ontological. This would lead to a loss of clarity and autonomy.

The scientific ideal of objectivity-as-value-freedom simultaneously embodies ideals of rationality, the self and society. Objectivity is not just about behaving in a proper manner or creating proper knowledge, it is also about creating the proper order in society. Objectivity-as-value-freedom functions as a tool for boundary politics, aiming to reshape the institutional order of society and establish a strict functional differentiation between state and universities. Weber attempts to co-produce scientific and social order.

Weber exempts his goal of autonomy from political debate by framing it as a purely formal *ethical* issue, since ethics stands outside the struggle between cultural values. However, very few today would agree with the idea that a formal ethics is *neutral* with regard to both culture and values, and that duty is a value-free notion. From a contemporary perspective, the ethical vision of the scientific calling and the boundary politics it brings appear as clearly political. Even more so, since Weber actually did not see the goal of 'the individual as an autonomous cultural being' as applicable to all classes of society. (Eliaeson 2000: 137)

It is common among English-speaking philosophers to believe that facts and values are dichotomous, just like Weber did. *Beliefs* are then assumed to be "purely factual" or "cognitive" and free from normative content. (Putnam 2002) These background assumptions about logic and language have been shown to be highly dubious. (see ch. 3) However, as long as they were accepted it was hard for philosophers to fully appreciate what anthropologists have been saying for a long time: Cosmological beliefs about the order of the world concern both what is true and what is good. Cosmological assumptions about e.g. the human self are also normative. (Sahlins 1996) There is presently a growing number of works that suggest that this applies also to scientific methodologies, although it would still remain an empirical question what the specific connections to values and wider cosmology are in any specific case. It is not clear beforehand *if* and *how* existential, moral and political concerns will affect a specific methodology.

I have here performed a sociological investigation of scientific methodology. This study has shown some of the cultural values and beliefs present in the case of Weber's methodology of objectivity-as-value-freedom. We have now found some of the background assumptions needed in order to render Weber's methodology fully coherent and reasonable. Scientific order, mental order and social order are all connected within an encompassing *cosmological* order. The scientific value objectivity-as-value-freedom should be understood against in connection with these cosmological background assumptions:

- Science, the human Self, Ethics and Politics are all characterised by internal agonistic relations. Each one contains a *plurality* of elements or perspectives that stand in *irreconcilable tension* to each other.
- Politics is a field of power struggles between values and interests, performed through the means of emotions and violence.
- Facts and values are dichotomous on both a logical and a semantic level. Language can be divided into evaluative and value-free terms.
- Culture shapes human reality and ascribes significance to the fragments we perceive. Human interests, perspectives, and scientific problems are all cultural.

- The human self is a subject with inner depth, divided into mental categories that can stand in conflict. The intellect can momentarily suppress the emotions.
- In view with the tradition of Bildung, the self is a cultural entity responsible for self-formation and developing a unique and autonomous character.
- The ethical notion of the calling becomes secularised and the duty to serve is extended to everyone. To autonomously *choose* one's calling (destiny; ultimate value) is the goal of the ethical life. The validity of this goal rests upon a formal ethical norm and lies beyond political value-struggles.
- Puritan asceticism is a model for the scientific calling. Empirical science presupposes that the value of truth is chosen. The scientist behaves in an ascetic manner, practicing self-abnegation and discipline in the service of truth. He should be passionately dedicated to the cause and therefore abstain from value-judgments and suppress his emotions.
- Value-free science facilitates autonomy. It a) allows people their own choice by not confusing facts with values or descriptions with prescriptions, b) facilitates the choice by providing clarity, and c) helps to educate and strengthen the German nation.
- In order for science to stay value-free, a certain social order is needed: functional differentiation and separation between the institutions of university and state, and between science and politics.

Take away some of these assumptions, e.g. science as a ascetic calling or human being as a cultural being, and objectivity would no longer have the same *form*. That is why Weber's objectivity differs from many accounts before and after him, as historical evidence shows. Also its *validity* as a scientific standard rest upon some of these assumptions.

Main conclusion

What has the case shown us? *The primary function of objectivity-as-value-freedom is to safeguard the formal vision of the good life: Autonomously choosing one's own ultimate values, calling, fate.* The standards of objectivity and good science that Weber proposes are infused with existential, moral and political concerns and depend partly on their context of origin. His vision of objective science depends on factors normally classified as subjective.

Howard Becker tells us that one way to *generalise* from a case study is to rephrase the findings on a higher level of abstraction. (Becker 1998: 125-8) In this case, I have found that non-scientific values become transformed into scientific values. Scientific values depend partly on cultural values, both in their origin and their validity. The outside determines not the full content, but the *form* of the inside. Do methodologies have politics? We have seen that concepts, questions and perspectives in a methodology are value-laden. Furthermore, in this case the inside also prescribes the form of the outside, the social order. Thus the inside also by

its very design performs outside functions; Weber's methodology is to an extent political. Inside and outside appear to stand in a dialectical relationship, giving form to each other. Although Weber's objectivity-as-value-freedom is sophisticated and insightful, it does not fully capture this complexity and some of its tenets no longer appear plausible. It seems Weber did not settle these matters once and for all.

Further research

Daston and Galison show how ideals of objectivity are connected to beliefs about the human self. Depending on the view of the self, objectivity will look different. The case of Weber confirms this. But Weber's objectivity is not only connected to a specific view of the self, but also of society. This suggests that another ideal of objectivity would prescribe another self and another society. The question of how scientists should be objective is not a timeless question of mere rationality but connected to cultural and political issues. It would be very interesting to move on from Weber and see how themes of objectivity, value-freedom and politics are played out in other well-known accounts of these matters, such as those by the economists Gunnar Myrdal and Milton Friedman.

List of abbreviations of Weber's writings

GASS = Gesammelte Aufsätze zur Soziologie und Sozialpolitik
GAW = Gesammelte Aufsätze zur Wissenschaftslehre
GPS = Gesammelte Politische Schriften
MSS = The Methodology of the Social Sciences
PE = Den protestantiska etiken och kapitalismens anda

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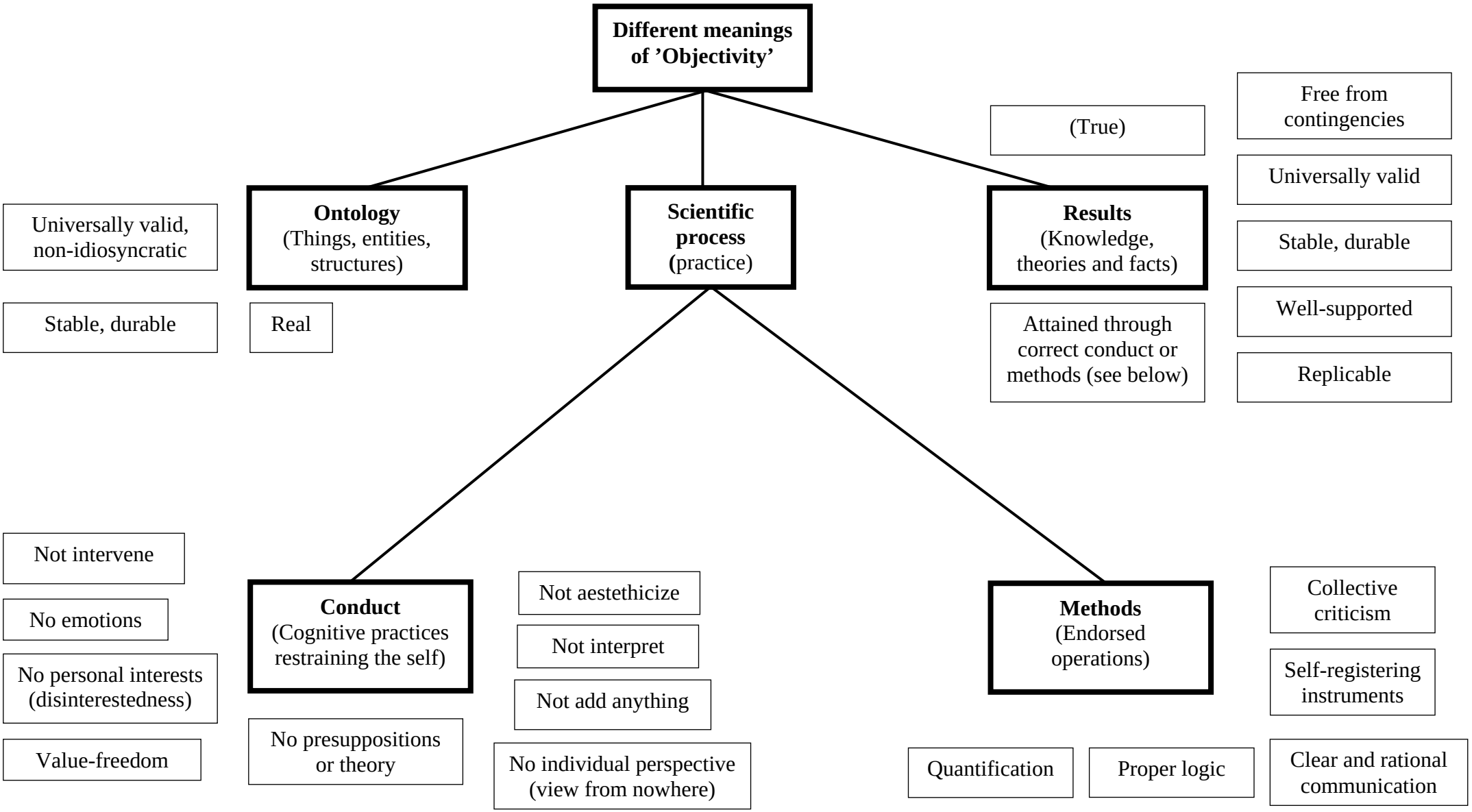
Different meanings of 'Objectivity'
Ontology (Things, entities, structures)
Scientific process (practice)
Results (Knowledge, theories and facts)
Universally valid, non-idiosyncratic
Stable, durable
Real
(True)
Free from contingencies
Universally valid
Stable, durable
Well-supported
Replicable
Attained through correct conduct or methods (see below)
Conduct (Cognitive practices restraining the self)
Methods (Endorsed operations)
Not intervene
No emotions
No personal interests (disinterestedness)
Value-freedom
No presuppositions or theory
Not aestethicize
Not interpret
Not add anything
No individual perspective (view from nowhere)
Quantification
Proper logic
Collective criticism
Self-registering instruments
Clear and rational communication